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ABSTRACT

The North Carolina End-of-Course Testing Program was established to provide student, school, and school system information about achievement in high school courses. This report describes: (1) "Characteristics of Algebra II Students"; (2) "Student Performance on the Core Test"; (3) "Combining Performance and Participation: Yield and Effective Yield"; (4) "Anticipated Final Grades and Scores on the Core Test"; and (5) "Average Performance on the Curriculum Test." Each Algebra II student took one of four statistically equivalent 56-item tests during the final days of the school year. The average score was 37.6, or 67.2 percent correct. Performance on the core test differed by parental education, ethnic group, grade level in school, and anticipated final course grade. The select group of students taking Algebra II in the tenth grade had higher average scores than students at any other grade level. Performance and participation rates in educational regions and public school systems, and state percentile tables for 1988-1989 are provided in the appendices. (YP)

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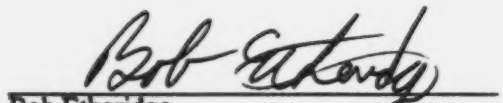
FOREWORD

The End-of-Course Testing Program was established in 1985-86 to provide comparative information about student performance and curricular information about school and school system performance on the goals and objectives outlined in the Standard Course of Study and the Teacher Handbook. By assessing student achievement in this manner, state and local education can determine the degree to which students are meeting the expectations set forth in the Standard Course of Study.

Algebra II was first assessed in 1987 and is the third course in a math sequence expected of those going on to college. As such, this course is an important indicator of the preparedness of students going to college. Statewide, the Algebra II scores increased by 1.4 points from 1988 to 1989. Gains in achievement were posted by males and females and by all ethnic groups. These gains indicate progress by students enrolling in one of the more advanced math classes and is quite encouraging. Continued progress should be expected as school units put forth their best efforts to improve secondary education in North Carolina.



Bob Etheridge
State Superintendent of Public Instruction

ABSTRACT

The North Carolina End-of-Course Testing Program was established to provide student, school, and school system information about achievement in high school courses. The first Algebra I End-of-Course Test was administered in 1985-86. Algebra II and Biology were added to the testing program in 1986-87 and U.S. History was added in 1987-88. Geometry and chemistry were added in 1988-89. Other high school courses will be added in future years.

The 35,132 students who took the Algebra II End-of-Course Test in 1988-89 were a subgroup of the high school population. School systems vary in the proportion of students that take Algebra II during their school career and in the proportion of students that take Algebra II at different grade levels. Algebra II is generally the third course in the mathematics sequence following Algebra I and geometry. It appears that approximately 40.1 percent of a class of students and 57.6 percent of Algebra I students take Algebra II. Although students whose parents have no more than a high school education and black students appear to be underrepresented in Algebra II classes across the state, the proportion of Algebra II students that are black has increased since the first Algebra II administration in 1987.

Each Algebra II student took one of four statistically equivalent 56-item tests during the final days of the school year. The average score was 37.6 or 67.2 percent correct, a gain of 1.4 raw score points over the 1987-88 average. Performance on the core test differed by parental education, ethnic group, grade level in school, and anticipated final course grade. Most of the students taking Algebra II in the tenth grade are on an accelerated course sequence which includes Algebra I in the eighth grade, geometry in the ninth grade and Algebra II in the tenth grade. The select group of students taking Algebra II in the tenth grade had higher average scores than students at any other grade level. The grading standards for tenth-grade performance appear to be higher than the standards for other students.

Schools and school systems can identify strengths and weaknesses in their instructional programs by examining relative performance on the goals and objectives measured by the 224 items administered in 1989 and the 488 items administered in 1988 and 1989. Average performance on the basic goals taught early in the course was higher than average performance on the more complex goals taught at the end of the course. Also, it appears that some areas of the curriculum need greater emphasis statewide.

Report of Student Performance

Algebra II

Spring 1989

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Introduction

North Carolina has developed six end-of-course tests and is in the process of developing additional end-of-course tests within a number of subject areas. The purposes of the tests are twofold:

1. The tests provide information about each individual student's performance relative to that of other students in North Carolina.

2. The tests provide information about school and school system achievement on the subject area goals and objectives specified in the *Standard Course of Study* and the *Teacher Handbook*.

The development of all the end-of-course tests will require many years of effort. End-of-course tests are the final product of a process which includes: curriculum development and review; statewide curriculum surveys; test specification; the writing, review, and field-testing of a large pool of test items matched to objectives in the *Teacher Handbook*; test construction using selected items from the pool; and review, field-testing, and equating of different forms of each test. Several forms of each end-of-course test are developed so that the same tests are not administered in subsequent years.

Based on statewide enrollment patterns and recommendations made by two commissions on education, the subject areas chosen for initial test development were biology and Algebra I. Item pools for these two courses were built in the spring of 1985. The results of the item development phase indicated that the Algebra I items were sufficient in quality and quantity to merit building end-of-course tests. Additional biology items and an item bank for Algebra II were developed during the 1985-86 school year, including field-testing in selected sites in May of 1986. In addition to Algebra I, both Biology and Algebra II End-of-Course Tests were administered statewide at the end of the 1986-87 school year. Since then, tests in additional courses have been added to the End-of-Course Testing Program at the rate of one or two a year. The State Board of Education's schedule for development of end-of-course tests through the 1991-92 school year is displayed in a chart on the final page of this report.

Although end-of-course tests for different subject areas will vary in length, 110 minutes will be sufficient for administration of the multiple-choice tests in all subjects. The State Board of Education requires that end-of-course tests be administered during 110-minute periods within the last 10 days of school, and recommends that they be administered during final exam periods. In order for scores to be returned to school systems prior to the end of the school year, the proofs portion of the geometry test is administered during regular class periods in the spring. Also, when implemented in 1991-92, the English II essay test may be administered during the spring for scoring to occur prior to the end of the year.

The first North Carolina Algebra II End-of-Course Test was administered at the end of the 1986-87 school year. Unlike other end-of-course tests, one form of a 56-item test was administered in each classroom. In 1988 and 1989, four statistically-equivalent Algebra II test forms were administered in each classroom in order to collect more information about performance in particular areas of the curriculum. In 1988, each form contained an additional 10 variable items. Due to the change in administrative procedure, performance on the 1988 and 1989 core tests cannot be compared with 1987 performance. Therefore, average core scores of the 1988 administration provide a baseline with which to compare subsequent performance. Statewide performance on the entire set of 224 items administered in 1989, and the combined set of 488 items administered in 1988 and 1989, provides a standard to which school and school system achievement of goals and objectives can be compared.

Characteristics of Algebra II Students

Other North Carolina testing programs assess achievement in basic subject areas of an entire cohort or class of students. End-of-course assessments are different in two ways. First, some of the courses are offered to students at different grade levels. Second, some courses are not required of all students; the students who do take the courses are a subgroup of the total student population.

Table 1 compares certain characteristics of both Algebra I and Algebra II students with the broader population of all enrolled students. The top portion of the table provides the distribution of Algebra II students at various grade levels compared with the average daily membership in those grades. While the largest percentage of Algebra II students (48.8) was in the eleventh grade, 26.3 percent were in the tenth grade and 23.6 percent were in the twelfth grade. Most students taking Algebra II in the tenth grade are on an accelerated course sequence which includes Algebra I in the eighth grade, geometry in the ninth grade and Algebra II in the tenth grade.

A cross section of 35,132 students took Algebra II in different grade levels in 1988-89. An estimate of 40.1 percent of a cohort, or class, of students who will eventually take Algebra II in their school career was obtained by using enrollment in ninth grade as a cohort estimate. This estimate varies considerably among school systems, from a low of 17.1 percent to a high of 71.4 percent (see Table 11 and Figures 17--24 in the Appendix). In an independent study using a random sample of eleventh-grade students, 49.4 percent of North Carolina's and 46.8 percent of the nation's students report having taken Algebra II.[1] Students who take Algebra II must have successfully completed Algebra I.[2] Using the number of Algebra I students in 1986-87 and the number of Algebra II students in 1988-89, it is estimated that approximately 57.6 percent of Algebra I students will take Algebra II.

The second section of Table 1 compares the ethnic composition of Algebra II with the ethnic composition of K-12 pupil membership.[3] Compared with their distribution in the total school population, black students appear to be underrepresented and white students appear to be over-represented in Algebra II classrooms across the state. Although there are fewer black students taking Algebra II than would be expected if the proportion of black students was the same in Algebra II as in the school population, slightly more of North Carolina's black eleventh graders (36.7 percent) report having taken Algebra II than the nation's black eleventh graders (34.0 percent).[1] In addition, the gap in participation by ethnic group has narrowed slightly since 1986-87.

The third section of Table 1 compares parental education levels of Algebra II students with parental education levels of students in the eighth grade statewide.[4] Students who have parents with an education beyond high school composed 73.2 percent of Algebra II students but only 43.0 percent of the eighth-grade class. On the other hand, students with less educated parents appear to be underrepresented in Algebra II classes across the state. Among eleventh graders, 20.9 percent of North Carolina students and 26.5 percent of the nation's students whose parents have less than a high school education report that they have taken Algebra II.[1]

---

[1] Southern Regional Education Board (1987) and National Assessment of Educational Progress (1986) Assessment of Mathematics.

[2] In a 1987 random sample of North Carolina high schools, 76 percent report using grades in prerequisite courses as a criterion for enrollment in Algebra II. Approximately 64 percent of 1986-87 Algebra I students had an anticipated final grade of 'C' or better.

[3] Obtained from Table 11, North Carolina Public Schools, *Statistical Profile 1989*.

[4] Teachers recorded education level of the most educated parent of eighth-grade students taking the California Achievement Tests in 1988-89. Algebra II students recorded education level of their most educated parent.

Table 1

North Carolina Algebra II Students[1] Compared with 1988-89 First-Month Average Daily Membership in Tenth, Eleventh, and Twelfth Grades

Grade	ADM	Algebra II Students[1]	Percent of ADM	Percent of Algebra II Students
Tenth	82,375	9,230	11.2	26.3
Eleventh	74,622	17,148	23.0	48.8
Twelfth	72,278	8,291	11.5	23.6
Other		463		1.3
TOTAL	229,275	35,132	15.3	100.0

Percent of a class of students[2] taking Algebra II = 40.1
Percent of a class of students[2] taking Algebra I = 68.6

1988-1989 K-12 Pupil Membership[3], Algebra I, and Algebra II Students by Ethnic Group

Ethnic Group	Membership	Percent of Membership	Algebra I Students1	Percent of Algebra I	Algebra II Students1	Percent of Algebra II
American Indian	17,403	1.6	807	1.3	359	1.0
Black	328,395	30.4	15,666	26.2	6,969	19.9
White	720,698	66.7	42,310	70.7	26,865	76.8
Other	13,989	1.3	1,090	1.8	794	2.3
TOTAL	1,080,485	100.0	59,873	100.0	34,987	100.0

Parental Education of Eighth-Grade, Algebra I, and Algebra II Students

Parental Education	Eighth Grade Students[4]	Percent of Students[4]	Algebra I Students[1]	Percent of Algebra I	Algebra II Students[1]	Percent of Algebra II
Eighth Grade or Less	2,091	2.7	529	1.0	182	.5
8th to 12th	10,814	14.0	5,068	8.5	1,580	4.5
High School Graduate	31,213	40.3	16,356	27.6	7,581	21.7
More Than High School	33,345	43.0	37,409	63.0	25,556	73.2
TOTAL	77,463	100.0	59,362	100.1	34,899	99.9

[1]As identified in the 1988-1989 administration of the Algebra I or Algebra II End-of-Course Test.
[2]The 1988-89 ninth-grade class was used as a proxy for a class of students.
[3]Obtained from Table 11, North Carolina Public Schools, *Statistical Profile 1989*.
[4]As identified in 1988-89 administration of the California Achievement Tests.

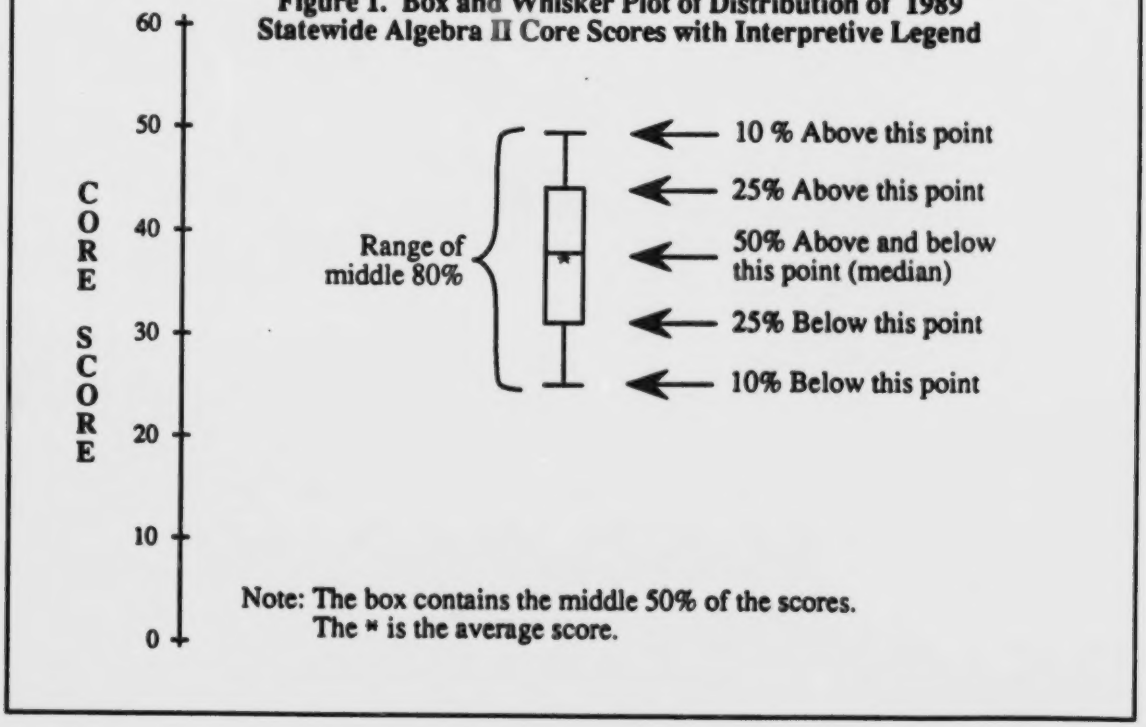
Student Performance on the Core Test

Summary scores for the 1988 and 1989 56-item core test are presented in Table 2 . Due to administrative differences between the 1987 and subsequent testing, scores on the 1987 test cannot be directly compared with scores on the subsequent tests. Performance on the 1988 Algebra II Test provides a standard to which growth in Algebra II achievement can be compared. In 1989, the average score for the 35,132 students taking the test was 37.6, or 67.2 percent correct, representing a gain of 1.4 raw score points over the 1988 administration.

Group achievement on tests, whether for schools, school systems, or the state, is usually reported using summary numbers such as the average or median which indicate typical performance for the group. One number, whether it is the average or the median score, provides limited information about performance. *Box and whisker plots* are graphs which describe not only typical performance, but also the performance of most of the students by showing the spread of scores. Box and whisker plots allow the comparison of the high and low scores for different groups as well as the middle scores.

Figure 1 shows how to interpret the box and whisker plots using statewide Algebra II scores for 1988-89. The *box* represents the middle 50 percent of scores with the median represented by a horizontal line inside the box. An '*' inside the box shows the location of the average (mean) score. The *whiskers* extend up to the 90th percentile and down to the 10th percentile. The entire figure shows the range of the middle 80 percent of scores. As can be seen in Figure 1, about 50 percent of Algebra II students answered between 31 and 45 (inclusive) items correctly. About ten percent of the Algebra II students scored 50 or above and ten percent scored at or below 25.

Figure 1. Box and Whisker Plot of Distribution of 1989 Statewide Algebra II Core Scores with Interpretive Legend



Note: The box contains the middle 50% of the scores.
The * is the average score.

Table 2

Average Performance on Algebra II Core Test: 1988--1989

	1988			1989		
	Number Tested	Average Score	Average Percent Correct	Number Tested	Average Score	Average Percent Correct
State	36,414	36.2	64.6	35,132	37.6	67.2
Sex						
Male	16,174	36.4	65.1	15,627	37.7	67.3
Female	20,154	36.0	64.2	19,403	37.6	67.1
Ethnic Group						
American Indian	351	32.1	57.3	359	34.0	60.6
Black	6,905	31.7	56.5	6,969	33.9	60.5
White	28,330	37.2	66.4	26,865	38.5	68.8
Other	697	41.8	74.6	794	41.9	74.7
Parental Education						
Less than Eighth Grade	216	34.8	62.1	182	35.1	62.7
Eighth to Twelfth	1,687	32.2	57.5	1,580	34.9	62.4
High School Graduate	7,752	34.0	60.7	7,581	35.8	63.9
More than Twelfth	26,476	37.1	66.3	25,556	38.4	68.5
Grade in School						
Ten	9,702	42.8	76.3	9,230	43.6	77.9
Eleven	18,276	35.1	62.7	17,148	36.9	65.8
Twelve	7,976	30.2	53.9	8,291	32.2	57.5
Other	460	44.0	78.6	463	43.7	78.0
Type of Class						
Regular Algebra II	29,216	34.6	61.8	28,137	36.1	64.5
Honors Algebra II	5,918	44.3	79.1	6,681	43.9	78.4

Table 2 also shows average performance on the 56-item core test by sex, parental education, ethnic group, grade in school, and type of class. Figures 2 through 5 show the distributions of Algebra II scores by various groups using box and whisker plots.

Average performance for males was similar to average performance for females. The distributions of scores are also similar for males and females. On average, white students and 'other' students scored higher than American Indian students and black students. Although students who have parents educated beyond high school had higher average scores than students who have less educated parents, the distributions of scores are similar for all education groups.

The largest difference in average scores appears among students taking Algebra II in different grade levels. Only 11.2 percent of the tenth-grade class took Algebra II; this select group of high achieving students scored higher than any other group. The average score for tenth-grade students was 43.6, more than 6 points higher than the average score for eleventh-grade students, and more than 11 points higher than the average score for twelfth-grade students. In Figure 5 it can be seen that 90 percent of tenth grade students scored above 33 while less than 75 percent of eleventh grade students scored above this point.

Students in honors Algebra II classes scored significantly higher than students in regular Algebra II classes. The 19.2 percent of Algebra II students who are in honors Algebra II classes achieved an average score of 43.9 while students in regular Algebra II classes achieved an average score of 36.1.

Combining Performance and Participation: Yield and Effective Yield

Since Algebra II is a selective course not taken by all students, performance may be related to participation within school systems or throughout the state. For example, if only the top 20 percent of students take Algebra II, scores will necessarily be higher than if the top 50 percent take Algebra II. *Yield* is an index of the effectiveness of an Algebra II program which takes into account both participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. Yield would be 100 if all students took Algebra II and all students achieved a perfect score. For the state, approximately 40.1 percent of a class of students took Algebra II in 1988-89 and these students achieved an average of 67.2 percent of core items correct, producing a yield of 26.9. If average achievement does not change, yield will increase whenever participation increases.

Effective Yield is a similar index but it counts as 'participating' in Algebra II only those students whose achievement is above a certain cutoff point. This cutoff point is an estimation of whether or not they will pass the course. The estimate for the cutoff point is 24. In 1986-87 Algebra II teachers indicated that approximately 11.1 percent of their students would receive a final grade of 'F'; the same year about 10.4 percent of students received a score below 24. For the state, the 'effective' percent of a class, i.e. students scoring at or above 24 in 1988-89, was 32,630 of the 87,675 students estimated to be in the cohort, or 37.2 percent, producing an effective yield of 25.0. Effective yield will be the same as yield only when all students taking Algebra II achieve at or above the estimated passing score of 24. Therefore, the effective yield index will normally be lower than the yield index.

Table 3 shows the yield and effective yield indices for 1988 and 1989. The 1988 and 1989 participation levels were about the same. However, scores were up from 1988 to 1989, and the percentage of students estimated to pass the course was higher in 1989, resulting in both higher yield and effective yield indices for 1989 as compared to 1988.

Figure 2. Distributions of Algebra II Core Scores by Sex -- 1989

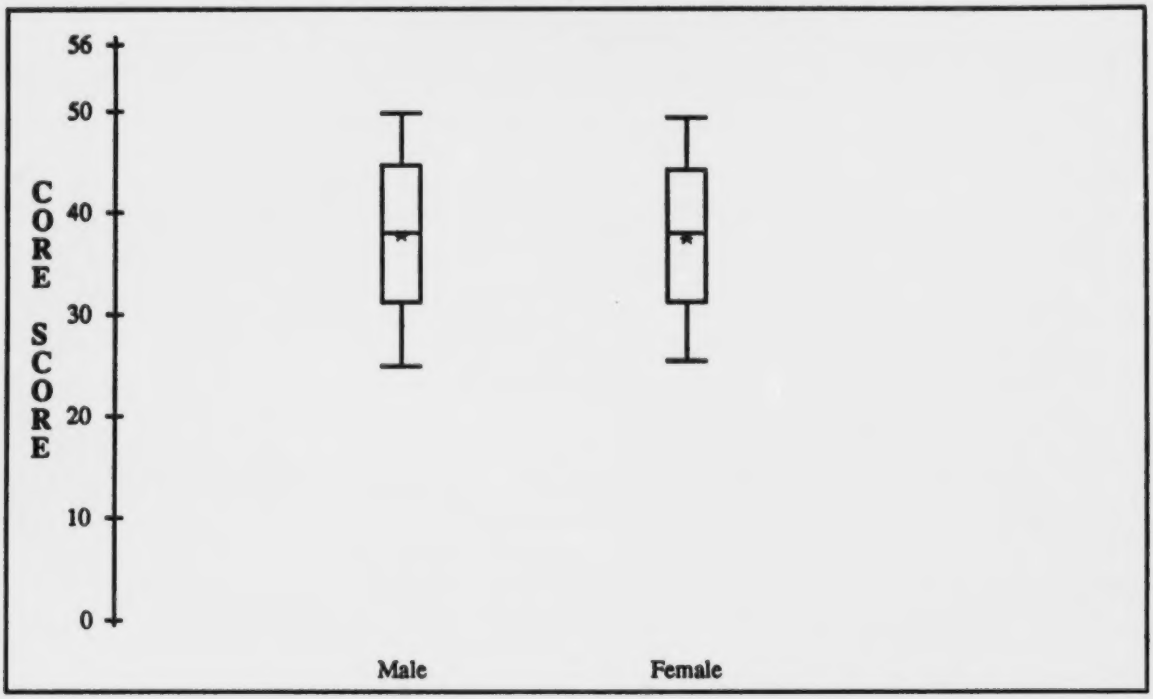


Figure 3. Distributions of Algebra II Core Scores by Ethnic Group -- 1989

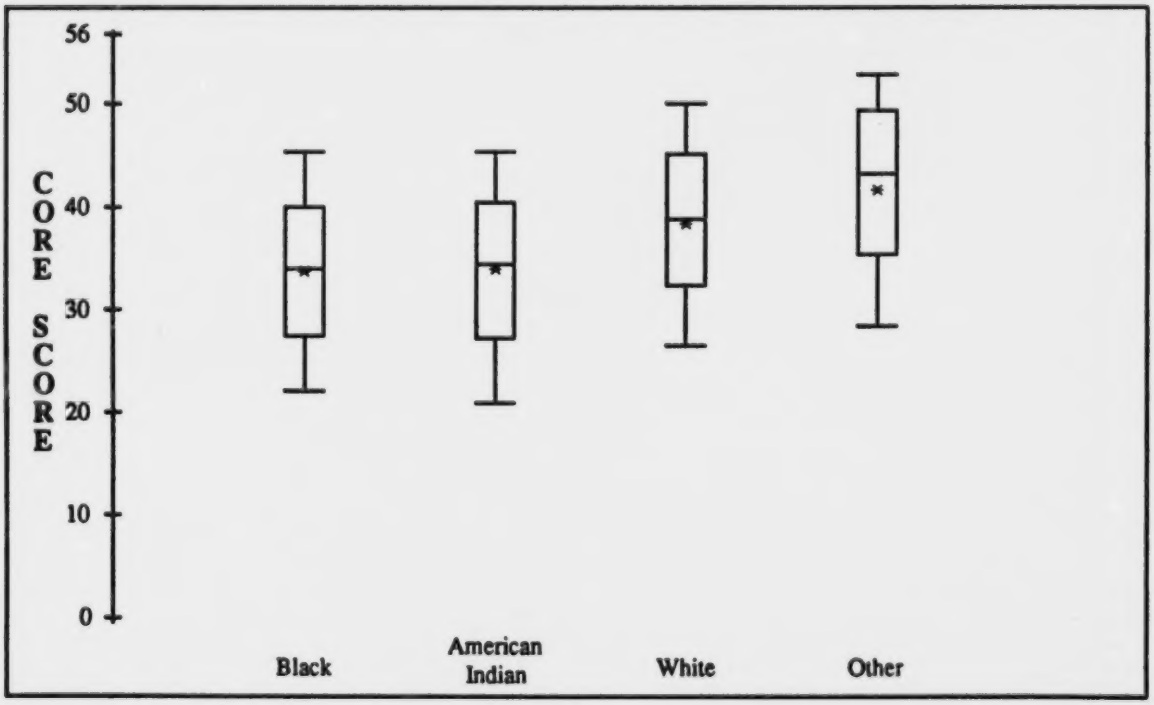


Figure 4. Distributions of Algebra II Core Scores by Parental Education -- 1989

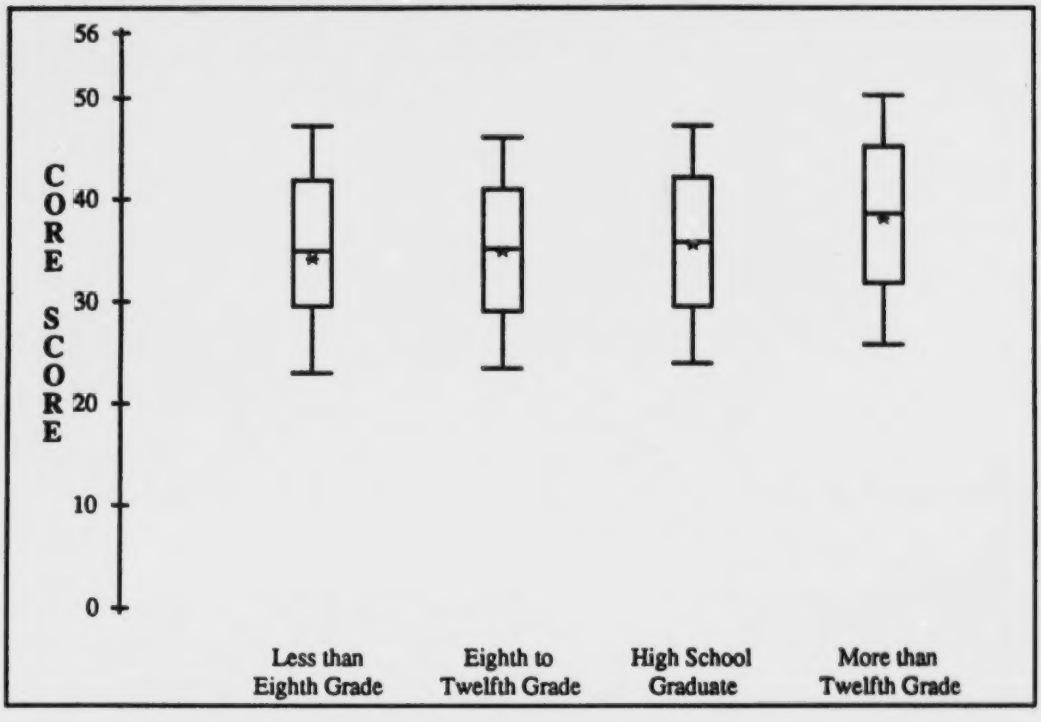


Figure 5. Distributions of Algebra II Core Scores by Grade Level -- 1989

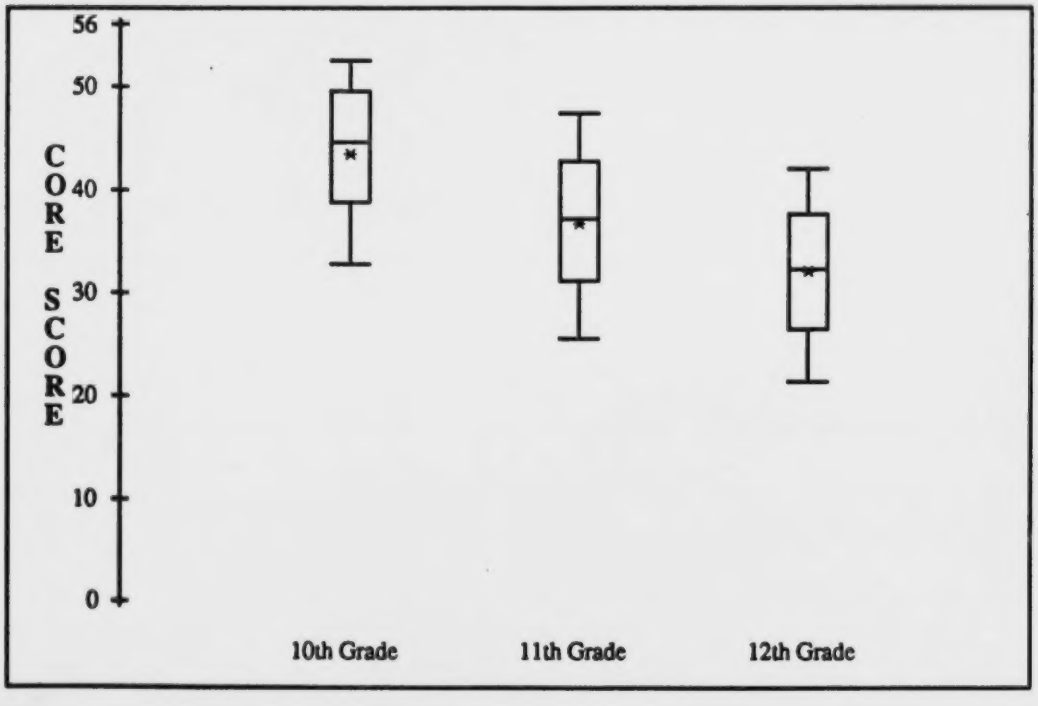


Table 3

Algebra II Yield and Effective Yield Indices for 1987--1988

	1988	1989
Yield	26.1	26.9
Effective Yield	22.5	25.0

The 1988 and 1989 core performance, participation (percent of class), yield, and effective yield for all 139 school systems in the state are presented by region in Table 10 in the Appendix. Comparisons among school systems should always be sensitive to the fact that the social and demographic factors which are strongly related to differences in achievement are not distributed evenly across the state. These factors influence the yield indices as well as performance. For example, school systems in high socio-economic areas should have both high participation and performance, resulting in high yield and effective yield indices. One appropriate comparison might be among school systems with similar socio-economic characteristics. Another would involve comparing yield and effective yield indices for a school system across time to look for changes in participation and performance.

The participation rates and average core performance for school systems are displayed in Figures 17 through 24. Vertical arrows represent the state averages. The lengths of the bars give a rough indication of yield and provide a visual representation of the effectiveness of school system Algebra II programs. School systems for which both bars extend beyond the state averages have both higher than average participation in Algebra II, and above average performance on the Algebra II End-of-Course Test.

Anticipated Final Grades and Scores on the Core Test

Algebra II teachers were asked to record each student's anticipated final grade on each answer sheet after the test was administered. Final grades were recorded for 34,976 of 35,132 Algebra II students. Table 4 gives the average score for various grade groups on the test and the percentages of students who were to receive the various grades for 1988 and 1989. A consistent difference of about 5 raw score points was observed between score averages for different anticipated final grades. This pattern is an indication of test validity in that the results parallel the grading practices of teachers. The average for 'C' students was similar to the statewide average in both years, placing these students in the middle of the score distribution.

Table 5 compares the average scores by anticipated grades between tenth and eleventh-grade students for 1988 and 1989. Average scores for the select group of tenth-grade students have been consistently higher than those for eleventh-grade students at each anticipated final grade. Greater proportions of students receive 'A's or 'B's in the tenth grade than in the eleventh grade and greater proportions of eleventh-grade students receive 'C's, 'D's or 'F's than tenth-grade students.

Box and whisker plots for the score distributions for each letter grade are displayed in Figure 6. The plot illustrates the spread of score points within letter grades and overlap in distributions across letter grades. For example, while the the typical 'F' student scored well below the typical 'D' student, approximately 10 percent of 'F' students received an above average core score.

Table 4

Average 56-Item Core Scores by Anticipated Final Grade and Percentage of Students Receiving Each Grade*: Algebra II End-of-Course Test: 1988-89

Grades	1988		1989	
	Average	Percentages	Average	Percentages
A	47.1	14.2	46.6	14.2
B	41.2	25.0	41.6	25.2
C	35.6	27.6	37.0	27.9
D	30.3	21.4	32.8	21.5
F	24.8	11.8	28.0	11.2

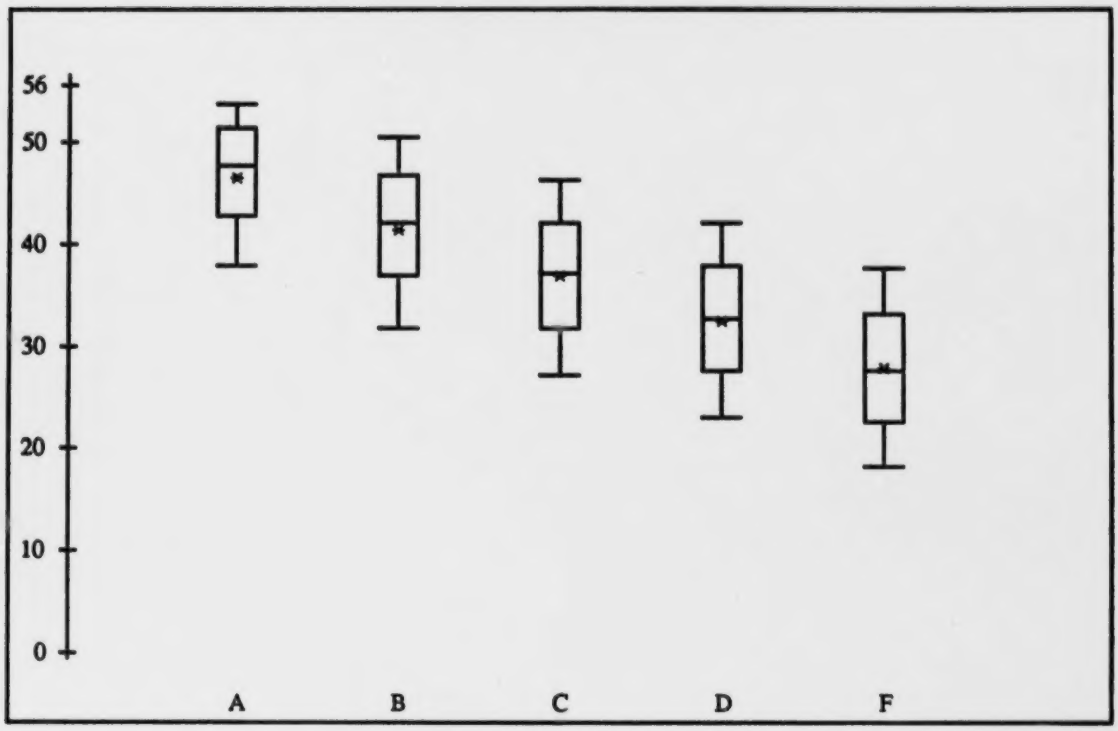
Table 5

Average 56-Item Core Scores by Anticipated Final Grade and Percentage of Students Receiving Each Grade within Tenth and Eleventh Grades: Algebra II End-of-Course Test: 1988-1989

Grades	1988				1989			
	Average Scores		Percentages		Average Scores		Percentages	
	Grade 10	Grade 11	Grade 10	Grade 11	Grade 10	Grade 11	Grade 10	Grade 11
A	49.2	45.1	27.4	11.5	48.6	44.8	27.7	11.4
B	44.4	39.8	33.7	24.9	44.8	40.6	34.7	24.9
C	39.9	34.8	24.4	29.8	40.9	36.7	23.9	30.0
D	33.8	30.4	10.6	21.7	36.9	33.1	10.0	22.2
F	27.2	25.2	4.0	12.1	32.0	28.5	3.6	11.4

*1988: N=35,738 1989: N= 34,976

Figure 6. Distributions of Algebra II Core Scores by Anticipated Final Grade -- 1989



Average Performance on the Curriculum Test

Table 6 shows average performance on the goals as measured by the 224 items assessed in 1989, for all Algebra II students in the state, and by sex, ethnic group, parental education level, and grade in school. Performance on most objectives can be reported by combining average performance on the 264 items measured in 1988 and the 224 items measured in 1989 (see Table 7).[1] The average scores reported in Table 7 include objectives for which there were at least four items in 1989, and in 1988 and 1989 combined. Since they are based on twice as many test items, goal and objective scores based on the combined data are better estimates of student achievement than those based on only one year of data. Goal and objective scores yield important information about performance within specific areas in the curriculum. The average percentage correct of all items measured in 1989 was 67.2, and was 65.8 when both 1988 and 1989 are combined.

Performance on Goal 1, in which students review the language of Algebra, was higher than that on any other goal for the combined two-year period. The two goals in which students perform operations with real numbers (Goal 3) or polynomials (Goal 6) also had average percentage correct scores above 70 percent. On the other hand, when students had to perform operations with algebraic fractions (Goal 7), average performance was 57.9 percent correct. Of the objectives reported in Goals 3 and 6, performance was above 80 percent correct on objectives in which students add real numbers, add polynomials, multiply a polynomial by a monomial, divide two monomials, and factor quadratic polynomials. When the student had to find the greatest common factor or the lowest common multiple of two ore more monomials (Objective 6.9) or had to factor polynomials completely in problems involving multiple steps (Objective 6.15), average performance dropped to just under 55 percent correct.

Three goals focus on solutions to equations. Among these goals, average performance was highest (67.0 percent) on Goal 5, "solve systems of linear equations". Performance was similar on Goals 4 and 9 in which students had to solve quadratic equations, linear equations, and inequalities. Two of the objectives reported this year for these goals had average percentage correct scores above 70 percent: Objective 5.1:"find the solution sets of open sentences in two variables with given replacements for the variables"; and Objective 5.2: "find the solution sets of systems of two linear equations in two variables."

In Goals 8, 10, 12, and 14, students solve various types of special problems. When the problems involve radical expressions (Goal 8), the average performance was close to that of average performance overall. The lowest performance for any goal occurred on those with the few problems in Goal 14 involving logarithmic functions.

Using analytic geometry to solve problems is the subject of Goal 11. The important concepts covered in this goal lay part of the foundation for understanding advanced mathematics such as calculus. Average performance on the 38 items measuring this goal in 1988 and 1989 was 53.4 percent correct.

Statewide performance across all Algebra II goals and objectives shows areas of strength and areas in which improvement is needed. As schools and school systems examine their own performance on these goals and objectives, they can identify patterns of strengths and weaknesses relative to statewide performance.

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[1] A curriculum survey of all North Carolina Algebra II teachers determined that several Algebra II objectives, including all of the objectives for Goal 13, are not basic to all Algebra II classes. They are included in the *Teacher Handbook* as enrichment objectives and are not tested on the End-of-Course Tests.

Table 6

1989 Summary Results for Algebra II: 56-Item Core Test and 224-Item Curriculum Test

STATE REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSIONS
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
ALL STUDENTS TESTED																			
	35132	79.1	67.0	80.4	59.1	66.6	72.4	58.5	68.2	64.4	54.2	55.0	63.8	40.4	67.6	37.6	67.2	150.5	67.2
SEX																			
MALE	15627	79.4	68.5	80.3	58.9	66.3	72.1	57.2	68.2	62.9	53.8	56.7	65.2	39.7	70.5	37.7	67.3	150.7	67.3
FEMALE	19403	78.9	65.8	80.4	59.4	66.9	72.6	59.6	68.2	65.7	54.6	53.6	62.7	40.8	65.2	37.6	67.1	150.4	67.1
PARENTAL EDUCATION																			
LESS THAN 8TH	182	76.1	60.1	79.3	55.4	61.1	68.8	52.7	60.8	58.4	48.1	51.3	61.4	32.6	57.4	35.1	62.7	140.1	62.5
8TH TO 12TH	1580	75.6	60.5	76.9	53.9	62.1	68.1	53.5	63.4	60.9	49.6	48.6	58.3	33.7	61.0	34.9	62.4	139.8	62.4
HIGH SCHOOL	7581	76.6	63.1	77.9	55.2	63.6	69.6	54.7	64.8	61.6	51.3	50.4	60.6	36.4	63.7	35.8	63.9	143.2	63.9
MORE THAN 12TH	25556	80.1	68.6	81.4	60.7	67.8	73.5	60.0	69.6	65.6	55.5	56.8	65.2	42.0	69.2	38.4	68.5	153.5	68.5

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 6, cont'd.

STATE REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSIONS
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
GRADE IN SCHOOL																			
TEN	9230	85.8	77.7	87.3	73.1	77.1	82.1	72.4	79.8	75.1	66.0	69.4	74.6	52.0	79.1	43.6	77.9	174.6	77.9
ELEVEN	17148	78.6	65.5	79.8	57.1	65.7	71.3	56.3	66.7	63.4	52.0	52.7	62.2	37.5	66.5	36.9	65.8	147.4	65.8
TWELVE	8291	72.3	57.6	73.5	46.9	56.2	63.2	46.7	57.8	54.0	45.0	42.9	54.9	32.7	56.7	32.2	57.5	128.7	57.5
OTHER	463	85.4	77.9	88.0	74.9	77.0	82.1	72.0	80.7	74.3	70.1	69.1	71.0	49.5	76.4	43.7	78.0	174.7	78.0
ETHNIC GROUP																			
AMER.INDIAN	359	73.7	58.7	75.0	53.0	59.0	68.2	52.8	58.9	55.4	52.5	45.1	57.9	35.2	58.7	34.0	60.6	136.0	60.7
BLACK	6969	73.7	58.2	74.8	51.0	59.7	66.9	52.1	61.4	59.7	47.2	46.1	56.2	35.0	58.3	33.9	60.5	135.5	60.5
WHITE	26865	80.5	69.2	81.8	61.0	68.4	73.6	59.9	69.8	65.6	55.9	57.1	65.7	41.5	70.0	38.5	68.8	154.1	68.8
OTHER	794	82.4	72.8	85.6	69.8	71.4	79.3	72.0	77.1	72.1	63.9	65.0	68.5	54.4	71.7	41.9	74.7	167.4	74.7

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 7

1989 Summary Results for Algebra II Goals and Objectives

		1989	1988 AND 1989
GOAL 1:	USE THE LANGUAGE OF ALGEBRA (19,42)	79.1	78.8
1.1:	USE THE ORDER OF OPERATIONS & EVALUATE ALGEBRAIC EXPRESSIONS (4,8)	72.6	76.6
1.2:	TRANSLATE ENGLISH WORDS & PHRASES INTO MATHEMATICAL LANGUAGE (4,9)	89.6	81.9
1.3:	USE THE PROPERTIES OF ADDITION TO SIMPLIFY ARITHMETIC & ALGEBRAIC EXPRESSIONS (4,9)	76.6	76.0
1.4:	USE THE PROPERTIES OF MULTIPLICATION TO SIMPLIFY ARITHMETIC & ALGEBRAIC EXPRESSIONS (4,8)	82.9	77.2
1.5:	USE THE DISTRIBUTIVE PROPERTY OF MULTIPLICATION OVER ADDITION TO SIMPLIFY ARITHMETIC & ALGEBRAIC EXPRESSIONS (3,8)	***	82.1
GOAL 2:	LOCATE NUMBERS ON THE NUMBER LINE & ON THE COORDINATE PLANE (14,32)	67.0	66.0
2.1:	GRAPH SETS OF REAL NUMBERS ON THE NUMBER LINE (2,6)	***	78.6
2.2:	GRAPH ORDERED PAIRS OF NUMBERS ON THE COORDINATE PLANE & FIND THE COORDINATES OF POINTS ON THE PLANE (4,9)	66.8	70.2
2.3:	GRAPH LINEAR EQUATIONS IN TWO VARIABLES (4,9)	67.3	60.4
2.4:	GRAPH A RELATION ON THE COORDINATE PLANE (1,2)	***	***
2.5:	GRAPH THE SOLUTION SETS OF SYSTEMS OF LINEAR INEQUALITIES IN TWO VARIABLES (1,2)	***	***
2.6:	GRAPH A FUNCTION ON THE COORDINATE PLANE (1,2)	***	***
2.7:	GRAPH THE EQUATIONS OF A PARABOLA, CIRCLE, ELLIPSE, & HYPERBOLA (1,2)	***	***
GOAL 3:	PERFORM OPERATIONS WITH REAL NUMBERS (22,52)	80.4	74.8
3.1:	ADD REAL NUMBERS (3,8)	***	83.2
3.2:	SUBTRACT REAL NUMBERS (4,9)	86.7	79.8
3.3:	MULTIPLY REAL NUMBERS (2,7)	***	78.0
3.4:	DIVIDE REAL NUMBERS (3,7)	***	64.9
3.5:	USE < OR > TO COMPARE TWO NUMBERS (4,9)	83.2	71.8
3.6:	SIMPLIFY EXPRESSIONS INVOLVING POSITIVE, NEGATIVE, & ZERO EXPONENTS (3,7)	***	69.5
3.7:	MULTIPLY AND DIVIDE NUMBERS WRITTEN IN SCIENTIFIC NOTATION (1,2)	***	***
3.8:	WRITE A RATIONAL NUMBER AS A TERMINATING OR REPEATING DECIMAL (2,3)	***	***
GOAL 4:	SOLVE LINEAR EQUATIONS & INEQUALITIES (20,40)	59.1	58.2
4.1:	SOLVE EQUATIONS IN ONE VARIABLE (2,3)	***	***
4.2:	SOLVE EQUATIONS INVOLVING ABSOLUTE VALUE (4,9)	52.4	52.3

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. THESE RESULTS ARE BASED ON AVERAGE PERFORMANCE ON 264 ITEMS MEASURED IN 1988 AND 224 ITEMS MEASURED IN 1989. EAC FOUR FORMS OF THE ALGEBRA II TEST WERE ADMINISTERED IN EVERY CLASSROOM. FIFTY-SIX ITEMS (THE CORE) WERE EQUIVALE ACROSS ALL FORMS. THE NUMBER OF ITEMS PER GOAL AND OBJECTIVE FOR 1989 AND 1988/1989 COMBINED ARE IN PARENTHESES.

Table 7, cont'd.

		1989	1988 AND 1989
4.3:	SOLVE EQUATIONS WITH RATIONAL COEFFICIENTS (5,9)	55.4	62.4
4.4:	SOLVE LITERAL EQUATIONS & FORMULAS (4,9)	54.6	53.8
4.5:	SOLVE INEQUALITIES IN ONE VARIABLE (4,8)	63.4	58.3
4.6:	SOLVE INEQUALITIES INVOLVING ABSOLUTE VALUE (1,2)	***	***
GOAL 5:	SOLVE SYSTEMS OF LINEAR EQUATIONS (19,43)	66.6	67.0
5.1:	FIND SOLUTION SETS OF OPEN SENTENCES IN TWO VARIABLES WITH GIVEN REPLACEMENTS FOR THE VARIABLES (4,9)	79.5	70.6
5.2:	FIND THE SOLUTION SETS OF SYSTEMS OF TWO LINEAR EQUATIONS IN TWO VARIABLES (4,9)	83.3	79.1
5.3:	USE SYSTEMS OF TWO LINEAR EQUATIONS IN TWO VARIABLES TO SOLVE PROBLEMS (3,7)	***	56.8
5.4:	FIND THE SOLUTION SETS OF SYSTEMS OF THREE LINEAR EQUATIONS IN THREE VARIABLES (4,9)	64.2	65.7
5.6:	SOLVE SYSTEMS OF LINEAR EQUATIONS BY USING CRAMER'S RULE (4,9)	43.7	60.3
GOAL 6:	PERFORM OPERATIONS WITH POLYNOMIALS (46,101)	72.4	72.1
6.1:	ADD POLYNOMIALS (4,9)	89.1	84.5
6.2:	SUBTRACT POLYNOMIALS (4,8)	71.5	67.9
6.3:	MULTIPLY A POLYNOMIAL BY A MONOMIAL (3,8)	***	81.0
6.4:	MULTIPLY TWO BINOMIALS BY USING SPECIAL PRODUCT FORMULAS (3,7)	***	73.2
6.5:	MULTIPLY A BINOMIAL & A POLYNOMIAL (4,9)	71.1	75.0
6.6:	FIND THE QUOTIENT OF TWO MONOMIALS (3,8)	***	80.9
6.7:	DIVIDE ONE POLYNOMIAL BY ANOTHER ONE OF LOWER DEGREE (4,8)	82.8	73.0
6.8:	USE SYNTHETIC DIVISION TO DIVIDE A POLYNOMIAL BY A LINEAR BINOMIAL (0,0)	***	***
6.9:	FACTOR MONOMIALS & FIND THE GCF AND LCM OF TWO OR MORE MONOMIALS (3,4)	***	54.6
6.10:	FACTOR SPECIAL POLYNOMIALS (4,9)	76.0	70.4
6.11:	FACTOR QUADRATIC POLYNOMIALS (4,9)	85.8	82.8
6.12:	USE FACTORING TO SOLVE AN EQUATION (5,10)	51.5	59.4
6.13:	USE POLYNOMIAL EQUATIONS TO SOLVE PROBLEMS (2,3)	***	***
6.14:	USE FACTORING TO SOLVE INEQUALITIES (1,2)	***	***
6.15:	FACTOR POLYNOMIALS COMPLETELY (2,7))	***	54.7

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. THESE RESULTS ARE BASED ON AVERAGE PERFORMANCE ON 264 ITEMS MEASURED IN 1988 AND 224 ITEMS MEASURED IN 1989. EAC FOUR FORMS OF THE ALGEBRA II TEST WERE ADMINISTERED IN EVERY CLASSROOM. FIFTY-SIX ITEMS (THE CORE) WERE EQUIVALE ACROSS ALL FORMS. THE NUMBER OF ITEMS PER GOAL AND OBJECTIVE FOR 1989 AND 1988/1989 COMBINED ARE IN PARENTHESES.

Table 7, cont'd.

		1989	1988 AND 1989
GOAL 7:	PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS (17,40)	58.5	57.9
7.1:	WRITE ALGEBRAIC FRACTIONS IN LOWEST TERMS (3,7)	***	63.8
7.2:	SIMPLIFY PRODUCTS & QUOTIENTS OF RATIONAL ALGEBRAIC EXPRESSIONS (4,9)	71.0	70.5
7.3:	SIMPLIFY SUMS & DIFFERENCES OF RATIONAL ALGEBRAIC EXPRESSIONS (4,8)	55.2	53.3
7.4:	SIMPLIFY COMPLEX FRACTIONS (3,8)	***	46.3
7.5:	SOLVE FRACTIONAL EQUATIONS (3,8)	***	55.0
GOAL 8:	SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION (18,41)	68.2	64.7
8.1:	SIMPLIFY ROOTS OF REAL NUMBERS (4,8)	75.3	73.5
8.2:	SIMPLIFY EXPRESSIONS INVOLVING FRACTIONAL EXPONENTS (3,7)	***	54.1
8.4:	SIMPLIFY EXPRESSIONS INVOLVING SUMS & DIFFERENCES OF RADICALS (4,9)	73.5	69.4
8.5:	SIMPLIFY EXPRESSIONS INVOLVING PRODUCTS & QUOTIENTS OF RADICALS (3,7)	***	50.2
8.6:	INDICATE THE SQUARE ROOT OF A NEGATIVE NUMBER AS A COMPLEX NUMBER (3,8)	***	74.2
8.7:	SOLVE EQUATIONS WHICH CONTAIN RADICAL EXPRESSIONS (1,2)	***	***
GOAL 9:	SOLVE QUADRATIC EQUATIONS (9,18)	64.4	57.3
9.1:	COMPLETE THE SQUARE TO SOLVE QUADRATIC EQUATIONS (2,3)	***	***
9.2:	USE THE QUADRATIC FORMULA TO SOLVE QUADRATIC EQUATIONS (4,9)	76.2	62.8
9.3:	USE THE DISCRIMINANT OF A QUADRATIC EQUATION TO DETERMINE THE NATURE OF THE ROOTS (1,2)	***	***
9.4:	WRITE A QUADRATIC EQUATION GIVEN ITS SOLUTION SET (1,2)	***	***
9.6:	SOLVE A SYSTEM OF TWO EQUATIONS IN WHICH ONE OR BOTH ARE QUADRATIC (1,2)	***	***
GOAL 10:	SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS (5,8)	54.2	57.7
10.1:	ADD & SUBTRACT COMPLEX NUMBERS (2,3)	***	***
10.2:	SIMPLIFY EXPRESSIONS INVOLVING PRODUCTS & QUOTIENTS OF COMPLEX NUMBERS (2,3)	***	***
10.3:	SOLVE QUADRATIC EQUATIONS INVOLVING COMPLEX ROOTS (1,2)	***	***
GOAL 11:	USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS (18,38)	55.0	53.4
11.1:	USE THE DISTANCE FORMULA (1,2)	***	***
11.2:	DETERMINE THE COORDINATES OF THE MIDPOINT OF A SEGMENT (2,3)	***	***

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. THESE RESULTS ARE BASED ON AVERAGE PERFORMANCE ON 264 ITEMS MEASURED IN 1988 AND 224 ITEMS MEASURED IN 1989. EAC FOUR FORMS OF THE ALGEBRA II TEST WERE ADMINISTERED IN EVERY CLASSROOM. FIFTY-SIX ITEMS (THE CORE) WERE EQUIVALE ACROSS ALL FORMS. THE NUMBER OF ITEMS PER GOAL AND OBJECTIVE FOR 1989 AND 1988/1989 COMBINED ARE IN PARENTHESES.

Table 7, cont'd.

		1989	1988 AND 1989
11.3:	FIND THE SLOPE OF A LINE GIVEN TWO POINTS, AN EQUATION OF THE LINE, OR THE GRAPH OF A LINE (4,9)	55.4	55.5
11.4:	FIND AN EQUATION OF A LINE GIVEN ITS SLOPE & THE COORDINATES OF A POINT, OR THE COORDINATES OF TWO POINTS, OR ITS SLOPE & Y-INTERCEPT (4,9)	67.5	62.0
11.5:	DETERMINE IF TWO LINES ARE PARALLEL OR PERPENDICULAR BY EXAMINING THEIR SLOPES (4,9)	43.9	45.9
11.6:	USE THE PYTHAGOREAN THEOREM & ITS CONVERSE TO SOLVE PROBLEMS (1,2)	***	***
11.7:	WRITE THE EQUATION OF A CIRCLE FROM ITS GEOMETRIC PROPERTIES (1,2)	***	***
11.8:	IDENTIFY PARABOLAS, CIRCLES, ELLIPSES, & HYPERBOLAS FROM THEIR EQUATIONS (1,2)	***	***
GOAL 12:	SOLVE PROBLEMS INVOLVING VARIATION (3,5)	63.8	56.4
12.1:	USE DIRECT VARIATION TO SOLVE PROBLEMS (2,3)	***	***
12.2:	USE INVERSE VARIATION TO SOLVE PROBLEMS (1,2)	***	***
12.3:	USE JOINT VARIATION TO SOLVE PROBLEMS (0,0)	***	***
GOAL 14:	SOLVE PROBLEMS INVOLVING LOGARITHMIC & EXPONENTIAL FUNCTIONS (5,11)	40.4	44.4
14.1:	WRITE AN EXPONENTIAL FUNCTION AS A LOGARITHMIC FUNCTION & VICE VERSA (2,3)	***	***
14.5:	SOLVE PROBLEMS USING LAWS OF LOGARITHMS (3,8)	***	43.8
GOAL 15:	INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING (9,17)	67.6	61.1
15.1:	SOLVE "WORD PROBLEMS" (4,9)	71.8	62.2
15.2:	USE INEQUALITIES AS WELL AS EQUATIONS TO SOLVE "WORD PROBLEMS" (2,3)	***	***
15.3:	SOLVE "WORD PROBLEMS" INVOLVING FRACTIONAL EQUATIONS (2,3)	***	***
15.4:	USE QUADRATIC EQUATIONS TO SOLVE VERBAL PROBLEMS (1,2)	***	***
	PERCENT CORRECT ALL ITEMS (224,488)	67.2	65.8
	AVERAGE SCORE ALL ITEMS (224,488)	150.5	321.0
	NUMBER OF STUDENTS TESTED -- 1988	36414	
	NUMBER OF STUDENTS TESTED -- 1989	35132	

NOTE: THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. THESE RESULTS ARE BASED ON AVERAGE PERFORMANCE ON 264 ITEMS MEASURED IN 1988 AND 224 ITEMS MEASURED IN 1989. EAC FOUR FORMS OF THE ALGEBRA II TEST WERE ADMINISTERED IN EVERY CLASSROOM. FIFTY-SIX ITEMS (THE CORE) WERE EQUIVALE ACROSS ALL FORMS. THE NUMBER OF ITEMS PER GOAL AND OBJECTIVE FOR 1989 AND 1988/1989 COMBINED ARE IN PARENTHESES.

APPENDIX

Algebra II Core and Goal Performance in Educational Regions and Public School Systems

Table 8 presents average performance on the 56-item core test, the 224-item curriculum test, and the goals of Algebra II for the eight educational regions. Public school system average core and goal performance are given in Table 9. School systems are arranged by educational region.

Algebra II Box and Whisker Plots of Core Scores for Educational Regions and Public School Systems

Figure 7 displays the distributions of core scores for the eight educational regions using box and whisker plots. Public school system box and whisker plots are presented in Figures 8 through 15. See the interpretive legend in Figure 1 on page 4.

Algebra II Core Performance, Participation Rates, Yield, and Effective Yield for Public School Systems: 1988-1989

Table 10 presents participation rates, yield, effective yield, and performance on the equivalent 56-item core tests administered in both years for the public school systems. School systems are arranged by educational region. Comparisons among school systems should always be sensitive to the fact that the social and demographic factors which are strongly related to differences in achievement are not distributed evenly across the state. These factors influence the yield indices as well as performance. For example, school systems in high socio-economic areas should have both high participation and performance, resulting in high yield and effective yield indices. One appropriate comparison might be among school systems with similar socio-economic characteristics. Another would involve comparing yield and effective yield indices for a school system across time to look for changes in participation and performance.

Algebra II Core Scores and Participation Rates in Public School Systems

Figures 16 though 24 graphically present Algebra II core scores and participation rates (percent of class) for the public school systems. For each school system, the length of the bars representing the average core scores and class participation rates can be compared to the state averages for these measures (state averages are indicated by the vertical arrows). School systems for which both bars extend beyond the state averages have both higher than average participation in Algebra II, and above average performance on the Algebra II End-of-Course Test.

Characteristics of the Algebra II Students in Public School Systems

Select characteristics of all students in public school systems and students taking Algebra II are listed in Table 11. The percent of a class is an estimate of the percent of an entire cohort or class of students who will eventually take Algebra II in their public school career. As shown in Table I, in North Carolina it is estimated that 40.4 percent of a class of students will take Algebra II before they graduate from high school. The ethnic distribution and parental education distribution within school systems and Algebra II classes also varied by school system. Statewide, black students and students with less educated parents appear to be underrepresented in Algebra II classes.

State Percentile Tables for 1988-1989

Tables 12-13 give summary statistics, the score distributions, and state percentiles for the 1988 and 1989 administrations of the Algebra II End-of-Course Tests. The 1988 percentiles provide a baseline to which subsequent performance on the equivalent core tests can be compared.

Table 8

1989 Regional Summary Results for Algebra II: 56-Item Core Test and 224-Item Curriculum Test

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
NORTHEAST	1740	79.1	66.7	79.8	59.0	68.1	72.6	59.9	68.0	65.4	51.6	56.8	62.8	37.4	68.4	37.8	67.4	151.1	67.4
SOUTHEAST	3812	78.6	65.4	79.7	57.5	65.9	71.4	56.9	67.5	63.3	54.3	53.7	62.5	40.4	65.5	37.0	66.1	148.2	66.1
CENTRAL	6194	81.1	70.3	81.9	62.1	70.2	74.7	60.6	70.9	67.1	56.6	59.1	65.5	42.5	70.5	39.1	69.8	156.4	69.8
SOUTH CENTRAL	3863	77.9	63.4	79.4	56.4	64.4	71.7	57.9	65.7	63.0	52.9	50.9	61.3	37.8	64.6	36.6	65.3	146.3	65.3
NORTH CENTRAL	6856	79.3	67.9	81.1	60.6	66.0	73.0	59.8	69.6	64.8	55.6	56.1	64.0	43.3	68.2	38.1	68.0	152.3	68.0
SOUTHWEST	6483	78.1	64.9	78.7	56.4	65.2	70.5	55.8	65.5	61.8	51.8	51.2	61.8	38.7	66.1	36.4	65.1	145.7	65.1
NORTHWEST	3407	78.8	68.2	81.2	60.2	66.9	71.7	58.3	69.2	66.1	53.8	56.5	65.6	39.5	68.1	37.8	67.6	151.4	67.6
WESTERN	2777	79.0	68.2	80.8	60.3	66.0	72.7	59.3	68.3	64.7	55.4	56.3	68.3	38.7	69.2	37.9	67.7	151.7	67.7

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9

1989 School System Summary Results for Algebra II: 56-Item Core Test and 224-Item Curriculum Test

REGION NORTHEAST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
BEAUFORT COUNTY	93	76.6	59.3	71.3	44.8	62.4	65.0	47.0	62.2	56.0	40.0	47.1	49.5	35.7	63.3	33.2	59.4	132.9	59.4
WASHINGTON CITY	118	76.9	66.2	81.3	58.9	68.0	73.0	60.2	68.5	59.1	49.0	54.0	68.3	34.7	67.6	37.5	67.0	149.9	66.9
BERTIE COUNTY	91	79.7	60.5	78.0	53.6	64.7	69.5	51.1	67.8	60.8	50.6	47.6	63.0	17.6	66.8	35.5	63.4	142.0	63.4
CAMDEN COUNTY	54	72.9	70.5	79.4	57.7	71.9	72.1	57.8	59.7	64.0	41.8	51.9	63.1	41.6	69.3	36.8	65.7	147.5	65.9
CHOWAN COUNTY	67	80.5	73.3	84.5	64.8	73.0	78.5	64.3	74.6	68.1	65.3	62.5	78.2	46.3	77.3	40.9	73.1	163.7	73.1
CURRITUCK COUNTY	44	85.9	71.5	91.6	77.2	83.7	84.6	77.8	78.5	81.1	71.3	68.6	82.2	76.0	72.6	45.0	80.3	180.1	80.4
DARE COUNTY	82	88.2	78.9	84.5	78.6	78.1	83.1	76.5	75.1	71.3	68.7	74.3	75.6	42.4	79.0	44.1	78.7	176.4	78.8
GATES COUNTY	54	83.7	75.9	86.5	67.4	76.2	81.3	75.2	74.1	79.6	44.5	59.2	62.8	23.3	73.1	41.6	74.3	166.7	74.4
HERTFORD COUNTY	108	77.4	59.3	75.3	53.7	63.9	67.7	58.2	62.8	58.0	45.9	51.0	53.1	39.3	65.8	35.2	62.9	141.0	62.9
HYDE COUNTY	17	81.3	63.6	78.4	55.5	68.4	70.5	64.7	64.7	58.3	49.0	55.0	85.0	30.0	71.7	37.3	66.6	148.9	66.5
MARTIN COUNTY	193	74.1	57.8	73.5	49.6	57.8	64.7	49.7	61.5	60.1	45.5	50.6	57.4	39.4	61.8	33.7	60.1	134.6	60.1
PASQUOTANK COUNTY	141	77.7	64.6	81.7	55.8	67.7	69.6	52.8	64.2	62.2	51.0	52.8	61.4	27.8	70.4	36.4	65.0	145.6	65.0
PERQUIMANS COUNTY	53	79.7	66.8	81.6	66.3	74.8	80.1	64.6	78.4	70.5	66.2	56.3	72.3	39.5	75.8	40.6	72.6	162.6	72.6
PITT COUNTY	518	80.8	71.8	81.9	63.4	70.2	75.6	65.6	70.4	71.2	53.9	62.9	62.8	37.1	69.0	39.6	70.7	158.4	70.7
TYRRELL COUNTY	23	82.6	67.6	87.3	60.2	67.9	69.1	53.9	72.0	62.2	50.7	54.6	70.0	45.3	67.0	38.1	68.0	151.6	67.7
WASHINGTON COUNTY	84	76.6	57.5	72.3	45.2	60.6	64.4	46.4	64.3	55.3	43.3	46.8	49.9	47.4	59.7	33.1	59.2	132.9	59.4

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION SOUTHEAST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
BRUNSWICK COUNTY	181	81.1	66.7	80.0	58.9	65.2	71.5	56.5	71.9	58.0	55.0	54.5	69.9	45.4	64.1	37.4	66.9	149.9	66.9
CARTERET COUNTY	222	82.6	70.7	84.4	69.1	71.7	79.7	69.6	73.9	69.4	64.3	64.0	70.4	53.9	71.3	41.4	73.9	165.6	73.9
NEW BERN-CRAVEN	444	80.3	70.7	82.8	61.6	73.6	74.8	63.0	70.3	72.4	56.0	62.9	67.5	35.8	70.6	39.5	70.6	158.2	70.6
DUPLIN COUNTY	253	79.6	64.6	79.0	58.9	67.9	70.1	57.5	69.0	66.5	51.6	56.4	56.4	40.8	63.1	37.2	66.4	148.8	66.4
GREENE COUNTY	83	80.4	65.2	81.0	59.0	72.1	75.4	56.2	74.3	66.3	62.7	48.2	63.0	62.4	68.3	38.6	69.0	154.3	68.9
JONES COUNTY	23	75.6	70.5	85.8	58.2	67.4	68.5	52.5	65.7	57.0	39.3	55.9	76.7	36.7	69.3	37.0	66.0	147.3	65.8
LENOIR COUNTY	182	77.4	58.4	77.7	51.3	67.6	70.0	55.3	69.2	62.9	44.1	46.1	62.8	41.3	63.5	35.8	64.0	143.0	63.8
KINSTON CITY	169	80.9	68.1	83.6	64.1	71.4	74.1	60.9	70.9	69.2	54.8	60.4	68.6	45.5	66.2	39.2	70.1	157.0	70.1
NEW HANOVER COUNT	722	79.7	68.9	81.8	59.9	64.5	73.8	58.7	71.3	66.7	57.2	56.6	66.1	44.1	68.6	38.3	68.4	153.2	68.4
ONSLOW COUNTY	498	78.0	65.3	79.1	53.2	65.3	68.7	52.6	62.8	61.5	54.6	50.7	60.0	38.6	65.9	35.8	64.0	143.3	64.0
PAMLICO COUNTY	43	79.8	63.8	82.9	62.9	70.4	72.1	63.8	71.9	62.9	65.2	49.3	67.9	40.3	64.9	38.2	68.2	152.9	68.3
PENDER COUNTY	135	77.6	60.1	77.7	58.4	58.1	67.2	50.8	61.6	53.6	51.1	50.6	61.4	37.6	66.6	35.0	62.5	139.8	62.4
SAMPSON COUNTY	171	74.1	55.4	73.8	48.6	60.9	68.6	47.9	58.3	54.7	47.5	44.8	53.3	18.0	55.0	33.1	59.1	132.4	59.1
CLINTON CITY	76	78.7	74.4	84.7	67.4	75.6	77.6	65.6	74.0	76.6	58.9	65.2	56.1	54.7	64.9	41.0	73.1	163.8	73.1
WAYNE COUNTY	466	75.4	61.1	75.1	53.0	59.7	66.7	52.6	62.1	55.8	51.4	44.0	57.5	38.1	61.6	34.2	61.1	136.8	61.1
GOLDSBORO CITY	144	73.2	53.9	72.0	42.5	55.8	62.8	46.6	57.1	46.8	46.4	42.6	46.7	24.4	55.5	31.3	55.9	125.3	55.9

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION CENTRAL

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
DURHAM COUNTY	737	80.8	70.4	82.7	59.6	70.4	74.5	57.0	69.4	65.5	55.4	61.4	65.8	51.7	73.8	39.0	69.7	156.0	69.7
DURHAM CITY	181	67.2	49.8	67.3	42.5	55.6	58.4	42.2	54.1	63.1	41.2	45.0	51.2	19.1	55.3	30.1	53.8	120.7	53.9
EDGECOMBE COUNTY	118	77.9	55.2	73.8	47.9	56.1	66.5	51.7	56.0	47.3	41.0	45.9	60.0	35.8	57.6	32.9	58.8	131.8	58.8
TARBORO CITY	110	83.4	65.1	82.8	59.9	61.9	73.0	56.3	66.0	53.7	53.7	50.8	61.8	26.0	70.0	37.0	66.2	148.0	66.1
FRANKLIN COUNTY	169	79.3	68.9	76.3	54.5	69.2	72.9	54.0	67.8	64.1	47.9	54.0	61.0	29.1	64.7	36.9	65.9	147.5	65.8
FRANKLINTON CITY	52	65.0	44.1	63.0	47.8	52.4	56.5	50.4	50.7	51.6	24.6	33.6	56.2	23.0	51.7	28.7	51.2	115.0	51.3
GRANVILLE COUNTY	178	77.8	66.0	82.6	64.2	72.3	73.6	65.9	72.0	75.1	61.0	59.7	60.2	23.9	64.3	39.0	69.7	156.1	69.7
HALIFAX COUNTY	111	68.4	41.6	65.3	41.7	40.2	58.9	43.3	40.5	30.4	37.0	35.2	51.2	13.6	55.8	27.3	48.7	109.1	48.7
ROANOKE RPDS CITY	98	85.8	80.2	83.4	65.7	76.5	73.3	67.7	75.2	71.4	56.8	65.9	66.1	35.0	74.8	41.0	73.3	163.9	73.2
WELDON CITY	40	68.9	47.8	65.8	39.7	45.5	55.2	32.8	59.2	27.4	40.7	29.1	64.4	24.5	43.9	27.4	48.9	109.3	48.8
JOHNSTON COUNTY	471	80.4	70.6	81.6	60.8	72.5	75.1	57.0	67.1	72.8	53.0	58.8	68.8	33.3	71.2	38.8	69.3	155.3	69.3
NASH COUNTY	338	83.2	69.0	83.8	63.0	71.1	76.3	62.1	74.6	69.4	60.1	58.1	66.5	34.8	70.5	39.7	70.9	158.8	70.9
ROCKY MOUNT CITY	141	82.8	71.0	84.6	62.4	76.6	79.5	68.6	75.1	70.0	61.9	63.1	77.3	33.6	79.4	41.2	73.6	165.0	73.6
NORTHAMPTON COUNT	142	74.8	62.0	73.2	51.2	61.6	68.3	57.6	62.1	58.5	49.2	41.4	63.8	25.1	59.9	34.3	61.2	137.1	61.2
VANCE COUNTY	155	76.1	64.0	79.6	46.7	59.5	66.4	47.8	64.4	50.2	53.4	45.4	60.9	38.1	62.1	34.1	61.0	136.5	61.0
WAKE COUNTY	2786	83.7	75.1	84.8	67.5	73.9	77.9	65.0	76.0	70.3	61.2	64.3	67.2	51.9	73.7	41.3	73.8	165.4	73.8
WARREN COUNTY	56	73.5	64.1	72.9	50.3	62.7	68.7	49.7	55.8	49.5	36.6	37.6	56.3	33.9	71.1	33.5	59.8	133.9	59.8
WILSON COUNTY	311	82.7	73.1	83.6	66.9	71.8	77.0	64.7	72.2	74.9	59.3	59.2	67.4	32.5	68.9	40.2	71.9	161.0	71.9

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION SOUTH CENTRAL

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
BLADEN COUNTY	184	72.9	58.5	75.5	53.4	63.9	69.6	52.8	66.5	61.0	52.6	47.2	55.1	35.5	60.1	35.0	62.4	139.9	62.5
COLUMBUS COUNTY	161	75.4	65.4	78.6	59.1	62.2	74.0	63.0	61.6	55.2	53.8	51.1	60.1	47.7	66.8	36.8	65.8	147.3	65.8
WHITEVILLE CITY	92	81.0	65.8	82.6	62.6	76.9	76.0	62.7	65.9	69.6	59.1	57.0	69.6	49.6	65.7	39.3	70.2	157.3	70.2
CUMBERLAND COUNTY	1453	79.0	63.6	81.5	58.1	63.6	73.2	61.5	68.9	66.1	55.1	52.8	63.7	40.7	65.8	37.5	67.0	150.2	67.0
HARNETT COUNTY	301	78.3	60.2	76.5	58.2	66.5	71.3	53.5	64.5	65.5	49.8	48.2	60.4	38.3	61.3	36.1	64.4	144.2	64.4
HOKE COUNTY	96	84.0	62.9	81.9	61.7	64.3	76.6	69.8	75.6	68.0	56.3	56.8	69.2	30.9	67.1	39.2	70.0	156.9	70.0
LEE COUNTY	242	79.5	70.7	81.9	54.6	69.5	70.7	55.3	67.1	69.1	49.6	55.3	64.4	45.5	66.8	37.5	67.0	150.0	67.0
MONTGOMERY COUNTY	123	79.9	71.7	77.8	59.4	72.3	73.6	62.2	67.1	60.1	62.5	53.6	62.5	27.2	67.4	38.0	67.9	151.9	67.8
MOORE COUNTY	242	79.8	66.9	81.9	57.6	66.9	74.4	60.5	67.2	65.3	56.7	56.4	66.0	36.4	71.1	38.1	68.0	152.4	68.1
RICHMOND COUNTY	161	76.2	65.9	75.9	46.8	59.3	65.3	46.1	57.3	50.0	34.7	48.8	61.7	25.3	63.3	33.3	59.4	133.1	59.4
ROBESON COUNTY	270	73.3	56.0	74.6	50.1	57.1	67.4	50.3	58.0	54.5	52.8	42.5	55.5	26.7	59.1	33.1	59.1	132.5	59.2
FAIRMONT CITY	59	64.1	52.9	76.5	47.0	53.5	64.0	58.9	58.8	52.4	44.0	43.9	53.7	33.2	50.5	32.2	57.4	128.7	57.4
LUMBERTON CITY	142	79.6	70.5	78.2	55.6	62.1	69.8	54.9	64.2	64.5	52.5	45.9	61.3	26.9	67.1	36.0	64.4	144.0	64.3
RED SPRINGS	48	67.9	50.8	69.6	47.1	54.3	61.3	49.8	40.4	50.2	51.6	44.9	51.7	53.0	61.6	30.9	55.2	124.0	55.3
SAINT PAULS CITY	36	80.2	67.7	76.7	56.5	73.7	72.9	57.6	62.8	61.7	61.3	42.2	67.3	42.2	55.8	36.7	65.6	146.9	65.6
SCOTLAND COUNTY	253	78.9	60.2	78.3	57.0	68.5	70.9	52.4	64.5	59.4	47.5	48.1	48.2	37.2	62.7	35.9	64.0	143.5	64.1

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION NORTH CENTRAL

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
ALAMANCE COUNTY	391	79.0	65.0	78.7	54.1	63.3	68.6	51.4	63.5	59.9	47.4	47.8	64.1	35.2	66.3	35.5	63.4	142.0	63.4
BURLINGTON CITY	309	81.6	62.6	79.6	57.6	65.7	71.3	61.9	73.4	68.2	54.9	51.4	64.5	41.7	67.3	37.6	67.2	150.5	67.2
CASWELL COUNTY	109	71.4	54.7	74.9	45.2	57.7	57.4	37.6	54.5	57.1	46.1	39.5	53.7	26.5	58.9	30.8	55.0	123.1	54.9
CHATHAM COUNTY	176	81.8	70.0	83.2	70.9	75.0	76.4	65.9	75.8	73.5	55.7	62.8	61.3	46.1	71.6	40.8	72.9	163.4	73.0
DAVIDSON COUNTY	549	71.1	62.5	77.1	49.8	58.8	66.5	48.2	58.5	58.2	48.6	50.8	63.4	27.9	64.1	33.9	60.5	135.6	60.5
LEXINGTON CITY	120	67.7	56.9	72.2	45.1	56.2	59.1	40.2	50.4	48.2	40.2	36.4	38.7	31.4	57.9	30.1	53.7	120.3	53.7
THOMASVILLE CITY	50	84.6	77.3	80.4	61.5	73.0	78.0	62.0	72.4	73.2	63.6	62.8	52.0	37.6	72.6	40.2	71.8	161.2	72.0
FORSYTH COUNTY	1411	81.3	71.2	83.4	63.6	67.2	75.3	63.2	73.0	67.1	59.8	59.6	66.0	57.2	71.1	39.7	70.9	158.8	70.9
GUILFORD COUNTY	956	81.5	69.0	84.3	64.2	69.1	77.0	66.8	74.7	68.5	61.9	59.5	66.8	40.7	68.4	40.0	71.4	160.0	71.4
GREENSBORO CITY	857	78.1	64.1	78.5	60.9	65.8	72.8	58.5	68.7	64.6	53.4	54.5	63.2	39.4	65.6	37.4	66.8	149.6	66.8
HIGH POINT CITY	223	77.4	68.2	79.5	63.7	68.4	74.9	57.2	73.4	69.1	53.3	54.9	67.9	44.6	65.7	38.5	68.7	153.8	68.7
ORANGE COUNTY	177	76.9	61.6	76.5	52.6	58.9	65.4	44.9	63.0	54.8	43.7	49.1	56.4	35.7	60.1	33.9	60.6	135.7	60.6
CHAPEL HILL CITY	248	91.9	86.0	89.6	79.4	72.8	86.0	78.7	84.5	78.6	74.8	78.8	80.5	68.4	84.4	46.4	82.8	185.5	82.8
PERSON COUNTY	181	81.1	72.6	82.4	58.1	63.6	71.9	64.5	70.3	63.3	48.3	59.9	60.9	45.0	70.0	38.4	68.5	153.4	68.5
RANDOLPH COUNTY	346	80.7	70.5	81.4	60.6	64.5	74.7	61.2	69.9	62.3	56.8	56.0	61.6	41.3	69.7	38.4	68.5	153.6	68.6
ASHEBORO CITY	129	78.3	73.1	81.7	58.2	67.1	73.2	61.3	64.3	60.7	52.9	57.9	65.4	51.3	69.4	38.1	68.1	152.4	68.0
ROCKINGHAM COUNTY	103	78.4	62.7	82.3	63.0	76.3	74.2	61.6	68.9	64.0	47.7	51.3	66.9	33.8	63.1	38.2	68.2	152.6	68.1
EDEN CITY	108	80.4	74.5	83.3	59.8	76.2	73.1	58.7	66.0	63.7	53.3	62.0	64.0	39.7	75.3	39.1	69.8	156.2	69.7
WEST. ROCKINGHAM	110	76.9	65.7	78.2	58.7	65.4	68.1	59.0	67.1	67.2	62.7	55.9	72.2	52.5	71.3	37.3	66.5	149.1	66.6
REIDSVILLE CITY	95	80.4	70.7	79.7	65.6	73.9	73.4	58.9	67.9	68.3	52.8	62.9	49.9	45.9	68.2	38.9	69.4	155.9	69.6
STOKES COUNTY	208	72.8	62.3	78.3	57.8	53.5	70.1	56.4	63.6	53.0	52.0	42.8	56.6	22.3	62.5	34.6	61.7	138.3	61.7

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION SOUTHWEST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
ANSON COUNTY	130	69.9	51.5	71.0	44.8	50.9	60.8	45.9	53.3	51.7	36.2	39.3	56.2	26.0	49.6	30.3	54.1	121.1	54.1
CABARRUS COUNTY	492	80.5	69.9	79.8	63.5	71.5	73.9	60.8	71.5	68.3	48.8	58.9	66.1	42.3	68.0	38.9	69.4	155.5	69.4
KANNAPOLIS CITY	178	66.1	47.3	67.2	42.7	57.4	57.9	40.4	52.4	54.1	37.2	36.4	56.1	37.9	51.9	29.5	52.6	117.9	52.6
CLEVELAND COUNTY	214	75.0	67.4	81.5	63.6	67.1	74.1	58.0	67.6	64.7	58.4	60.0	59.4	42.2	67.3	38.2	68.2	152.7	68.2
KINGS MTN. CITY	102	79.5	61.5	75.1	54.9	65.8	70.5	57.5	67.8	62.6	55.7	51.1	61.5	52.7	71.9	36.6	65.4	146.6	65.5
SHELBY CITY	141	80.3	67.1	80.1	55.8	71.0	72.3	57.4	65.3	71.7	54.2	51.5	70.4	40.0	65.6	37.5	67.0	150.2	67.0
GASTON COUNTY	1010	76.8	60.5	78.3	52.2	60.8	68.3	51.9	63.2	61.1	50.6	44.7	60.5	35.0	63.2	34.8	62.2	139.2	62.2
LINCOLN COUNTY	244	75.9	57.2	75.2	49.3	63.0	66.3	55.4	64.6	57.0	43.2	45.8	55.3	35.5	60.5	34.2	61.1	136.8	61.1
MECKLENBURG COUNT	2576	79.1	67.8	80.1	59.3	66.6	72.2	58.6	67.1	61.7	55.3	53.9	63.2	39.5	68.6	37.5	67.0	150.0	66.9
ROWAN COUNTY	550	75.8	58.7	76.5	49.8	62.0	67.3	52.0	61.9	58.4	47.1	45.5	54.8	35.8	62.6	34.3	61.2	137.0	61.2
SALISBURY CITY	113	83.0	74.0	83.3	59.9	63.9	71.1	54.2	69.2	65.8	53.3	56.3	57.1	55.6	66.1	38.0	67.9	152.1	67.9
STANLY COUNTY	205	81.0	62.1	75.6	49.5	65.8	67.7	50.0	56.1	56.0	42.2	44.8	60.1	38.1	63.1	34.4	61.4	137.5	61.4
ALBEMARLE CITY	66	81.5	71.5	80.9	65.6	60.4	75.2	62.0	74.5	75.0	67.6	59.0	69.5	44.8	72.2	39.5	70.6	158.0	70.5
UNION COUNTY	365	83.3	76.2	83.3	63.3	72.1	76.6	59.8	71.7	66.2	58.5	61.1	71.1	38.7	76.1	40.1	71.6	160.3	71.6
MONROE CITY	97	71.3	55.5	75.2	48.7	62.1	65.8	47.4	62.3	56.0	45.3	42.0	54.6	34.0	56.8	33.1	59.0	132.3	59.0

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION NORTHWEST

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
ALEXANDER COUNTY	174	77.7	63.1	80.1	62.0	66.3	74.0	58.1	70.0	62.2	57.6	49.1	58.7	44.2	66.5	37.5	67.0	150.0	67.0
ALLEGHANY COUNTY	46	76.2	73.1	82.2	67.0	74.8	73.6	57.8	73.9	66.9	41.8	61.4	62.4	56.1	69.9	39.4	70.3	157.5	70.3
ASHE COUNTY	135	77.9	66.5	80.1	60.5	64.6	69.3	63.0	69.5	58.5	51.3	54.7	80.3	44.3	66.4	37.3	66.7	149.4	66.7
AVERY COUNTY	61	76.4	64.4	80.3	55.7	66.8	65.3	44.7	56.8	56.5	44.2	48.7	58.9	34.8	66.9	34.6	61.9	138.5	61.8
BURKE COUNTY	338	79.5	64.2	83.8	62.9	67.5	74.2	62.7	73.5	65.7	54.5	53.2	69.8	53.7	67.2	38.7	69.2	155.0	69.2
CALDWELL COUNTY	276	79.9	73.2	84.2	61.8	69.6	72.2	60.1	67.8	69.0	53.1	57.2	73.2	31.9	73.3	38.7	69.1	154.7	69.1
CATAWBA COUNTY	461	81.2	73.0	84.0	62.3	70.0	75.1	61.9	72.5	71.8	58.0	63.4	61.7	44.9	68.7	39.8	71.0	159.1	71.0
HICKORY CITY	143	86.8	78.5	87.6	68.0	78.3	79.9	67.6	78.6	74.5	58.0	70.4	74.9	29.1	81.4	42.7	76.3	171.0	76.3
NEWTON CITY	94	80.6	68.0	79.4	57.3	64.7	69.6	43.2	66.3	66.9	51.6	55.3	64.4	21.1	67.4	36.3	64.8	145.0	64.7
DAVIE COUNTY	147	81.1	69.2	82.0	63.8	68.3	75.6	65.4	76.9	71.8	61.5	63.5	64.8	43.8	73.7	40.1	71.6	160.3	71.6
IREDELL COUNTY	363	76.8	62.5	75.2	52.8	62.3	66.7	52.1	63.5	56.5	49.9	49.3	59.1	28.8	64.6	34.7	62.0	138.7	61.9
MOORESVILLE CITY	96	79.5	60.2	82.5	58.3	74.1	75.4	57.9	76.2	71.5	55.7	57.9	66.8	30.7	69.1	38.7	69.1	155.0	69.2
STATESVILLE CITY	115	79.1	59.6	80.6	57.9	61.4	70.4	60.2	74.3	63.8	59.9	46.3	60.6	30.8	62.4	36.6	65.3	146.4	65.3
SURRY COUNTY	196	71.6	70.6	79.5	59.9	62.9	68.9	54.0	62.1	63.9	45.8	59.7	65.1	29.4	68.8	36.4	64.9	145.3	64.9
ELKIN CITY	60	82.1	60.5	79.1	69.3	57.9	70.3	57.6	67.4	57.0	53.3	55.6	66.7	45.3	63.7	37.1	66.2	148.4	66.2
MOUNT AIRY CITY	67	82.6	66.2	84.8	68.0	68.2	73.1	64.8	71.6	76.1	61.4	59.9	68.3	17.9	67.8	39.3	70.2	157.5	70.3
WATAUGA COUNTY	154	84.6	85.0	87.3	75.1	74.0	82.1	76.2	88.8	82.7	69.7	75.4	77.5	73.9	78.3	45.1	80.6	180.5	80.6
WILKES COUNTY	332	74.2	64.9	76.1	49.9	59.9	65.2	47.8	56.4	60.5	45.7	47.4	59.1	33.2	60.6	33.6	60.1	134.7	60.1
YADKIN COUNTY	149	74.8	66.7	77.6	54.2	67.3	64.9	52.2	61.7	63.6	47.1	52.9	65.3	46.5	64.2	35.4	63.3	141.8	63.3

NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Table 9, cont'd.

REGION WESTERN

REGION REPORT

GOALS

GOAL 1: USE THE LANGUAGE OF ALGEBRA
GOAL 2: LOCATE NUMBERS ON NUMBER LINE AND COORDINATE PLANE
GOAL 3: PERFORM OPERATIONS WITH REAL NUMBERS
GOAL 4: SOLVE LINEAR EQUATIONS AND INEQUALITIES
GOAL 5: SOLVE SYSTEMS OF LINEAR EQUATIONS
GOAL 6: PERFORM OPERATIONS WITH POLYNOMIALS
GOAL 7: PERFORM OPERATIONS WITH ALGEBRAIC FRACTIONS
GOAL 8: SOLVE PROBLEMS INVOLVING RADICAL EXPRESSION
GOAL 9: SOLVE QUADRATIC EQUATIONS
GOAL 10: SOLVE PROBLEMS INVOLVING COMPLEX NUMBERS
GOAL 11: USE ANALYTIC GEOMETRY TO SOLVE PROBLEMS
GOAL 12: SOLVE PROBLEMS INVOLVING VARIATION
GOAL 14: SOLVE PROBLEMS INVOLVING LOGARITHMIC AND EXPONENTIAL FUNCTIONS
GOAL 15: INVESTIGATE SOME TECHNIQUES FOR PROBLEM SOLVING

	NUMBER TESTED	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 14	GOAL 15	AVG CORE	PCT CORE	AVG ALL ITEMS	PCT ALL ITEMS
NUMBER OF ITEMS		19	14	22	20	19	46	17	18	9	5	18	3	5	9	56	56	224	224
BUNCOMBE COUNTY	757	79.0	69.9	81.9	62.3	67.7	73.8	61.0	69.1	67.3	59.9	58.8	71.2	37.3	72.8	38.8	69.2	155.1	69.2
ASHEVILLE CITY	145	77.5	67.1	77.6	57.4	60.1	70.1	62.6	67.9	69.5	49.2	59.1	64.4	32.9	67.4	37.0	66.0	148.2	66.2
CHEROKEE COUNTY	107	81.4	67.2	81.7	63.3	70.1	76.8	58.4	69.9	63.9	57.6	51.7	69.8	51.9	69.8	38.9	69.5	155.6	69.4
CLAY COUNTY	28	82.7	71.4	81.2	60.7	72.2	72.4	60.5	72.2	69.8	40.0	66.7	52.4	34.3	65.1	38.9	69.4	155.4	69.4
GRAHAM COUNTY	61	80.7	74.6	82.9	64.4	72.3	77.1	65.7	68.0	79.6	63.6	66.9	63.0	57.0	78.7	40.9	73.0	163.7	73.1
HAYWOOD COUNTY	222	80.0	69.1	81.4	56.7	64.5	70.4	57.8	68.1	56.6	50.3	48.9	63.6	38.4	72.1	36.9	65.9	147.6	65.9
HENDERSON COUNTY	279	80.9	63.6	80.7	60.7	66.0	71.6	59.1	70.1	62.1	56.3	56.2	64.9	41.7	66.0	37.7	67.3	150.8	67.3
HENDRSNVLLE CITY	106	83.6	70.7	80.2	56.4	61.1	71.9	58.4	65.6	51.3	46.7	54.6	66.8	32.3	68.3	37.0	66.0	147.7	65.9
JACKSON COUNTY	143	78.4	69.5	83.6	62.0	64.4	74.7	60.9	68.5	64.3	55.3	56.4	69.4	35.5	66.5	38.3	68.5	153.3	68.4
MACON COUNTY	100	80.9	72.4	84.0	62.9	66.4	74.8	59.8	72.0	74.0	54.9	54.6	78.7	47.4	77.7	39.4	70.3	157.7	70.4
MADISON COUNTY	53	81.3	73.7	86.4	67.9	80.6	81.4	66.8	79.1	75.7	68.1	61.1	92.5	45.6	71.6	42.3	75.6	169.4	75.6
MCDOWELL COUNTY	179	72.8	62.4	74.9	56.0	62.3	68.7	50.6	57.5	58.6	52.6	50.3	55.5	35.7	64.7	34.7	62.0	138.9	62.0
MITCHELL COUNTY	70	75.9	64.3	74.5	55.6	61.0	68.6	49.4	67.4	60.6	50.9	63.9	65.3	40.1	61.0	35.8	64.0	143.6	64.1
POLK COUNTY	52	75.3	59.0	82.5	55.5	60.3	66.7	49.1	61.7	62.3	65.8	54.4	65.0	28.4	68.1	35.8	63.9	141.6	63.2
RUTHERFORD COUNTY	234	78.7	69.0	81.2	60.5	68.1	73.1	63.1	74.5	68.6	52.3	55.6	76.3	48.4	65.0	38.6	69.0	154.6	69.0
SWAIN COUNTY	42	72.0	69.5	73.4	43.2	63.2	64.0	40.5	50.9	55.9	31.6	38.7	46.1	30.4	66.9	32.1	57.3	128.2	57.2
TRANSYLVANIA COUN	124	82.0	73.4	81.8	64.3	69.1	76.3	63.8	71.9	68.1	57.0	60.4	69.1	27.3	71.0	39.6	70.8	158.4	70.7
YANCEY COUNTY	75	76.6	59.6	77.0	60.2	56.8	69.8	58.3	57.2	59.1	54.3	54.5	77.1	27.6	57.7	35.4	63.2	141.7	63.3

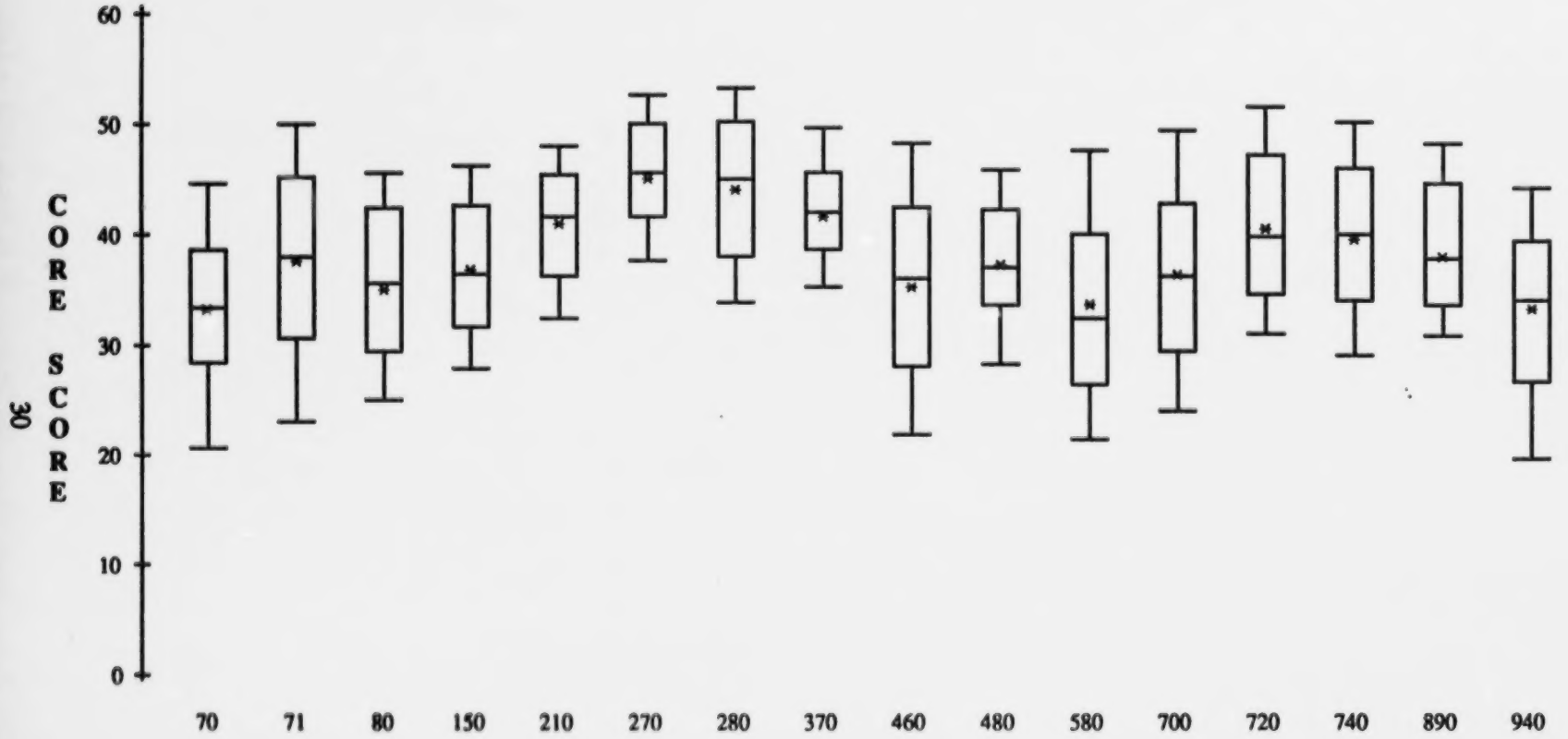
NOTE: THE NUMBER OF ITEMS MEASURING EACH GOAL WILL VARY ACROSS YEARS. THE NUMBER OF ITEMS IN EACH GOAL AREA IS DIRECTLY PROPORTIONAL TO THE NUMBER OF OBJECTIVES FOR THE GOAL. FOUR FORMS OF A 56-ITEM TEST WERE ADMINISTERED IN EVERY CLASSROOM, FOR A TOTAL OF 224 ITEMS.

Figure 7. Distributions of Algebra II Core Scores by Regions -- 1989

Regions :

1 Northeast	5 North Central
2 Southeast	6 Southwest
3 Central	7 Northwest
4 South Central	8 Western

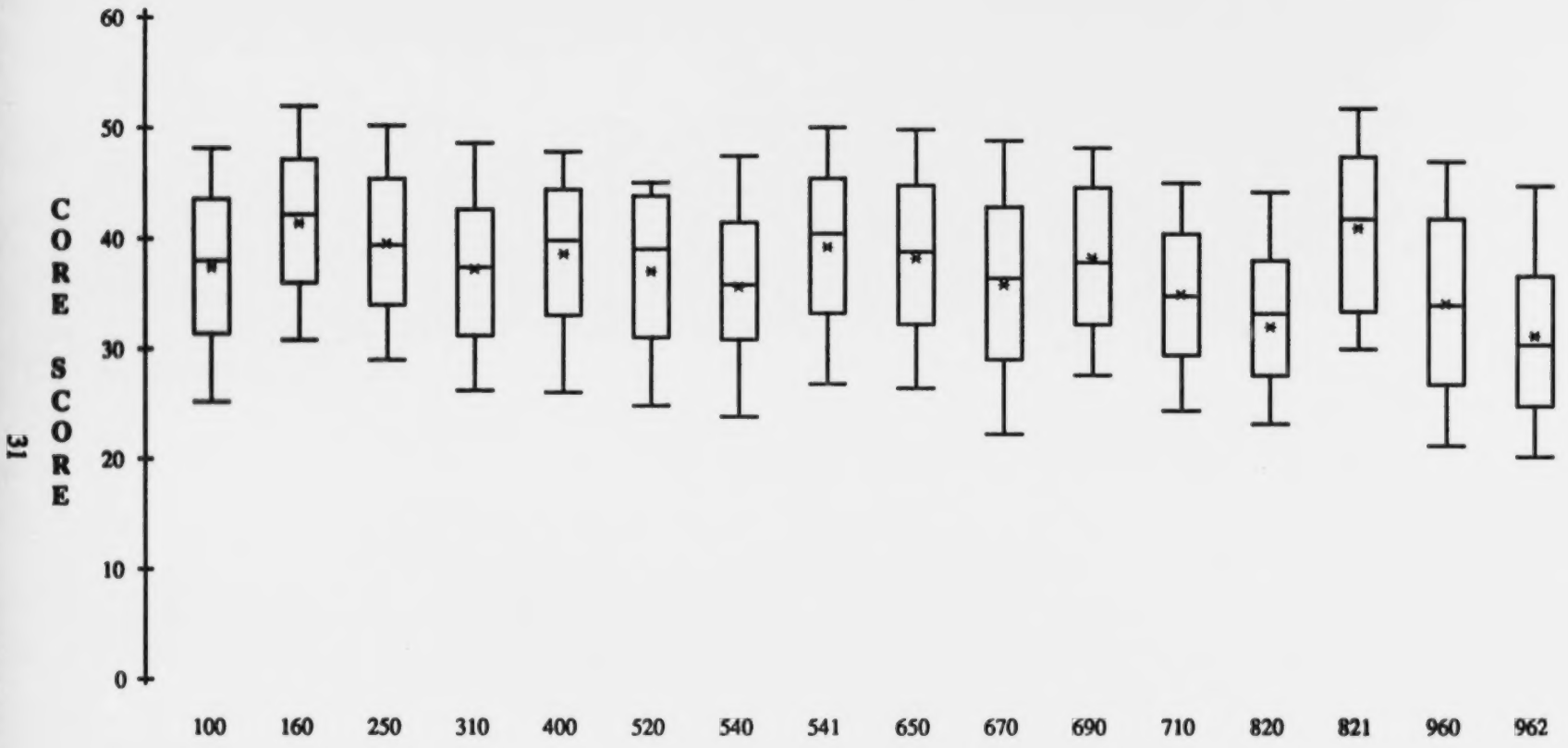
Figure 8. Distributions of Algebra II Core Scores by School Systems in the Northeast Region -- 1989



Northeast Region School Systems:

70 Beaufort Co.	210 Chowan Co.	460 Hertford Co.	720 Perquimans Co.
71 Washington City	270 Currituck Co.	480 Hyde Co.	740 Pitt Co.
80 Bertie Co.	280 Dare Co.	580 Martin Co.	890 Tyrrell Co.
150 Camden Co.	370 Gates Co.	700 Pasquotank Co.	940 Washington Co.

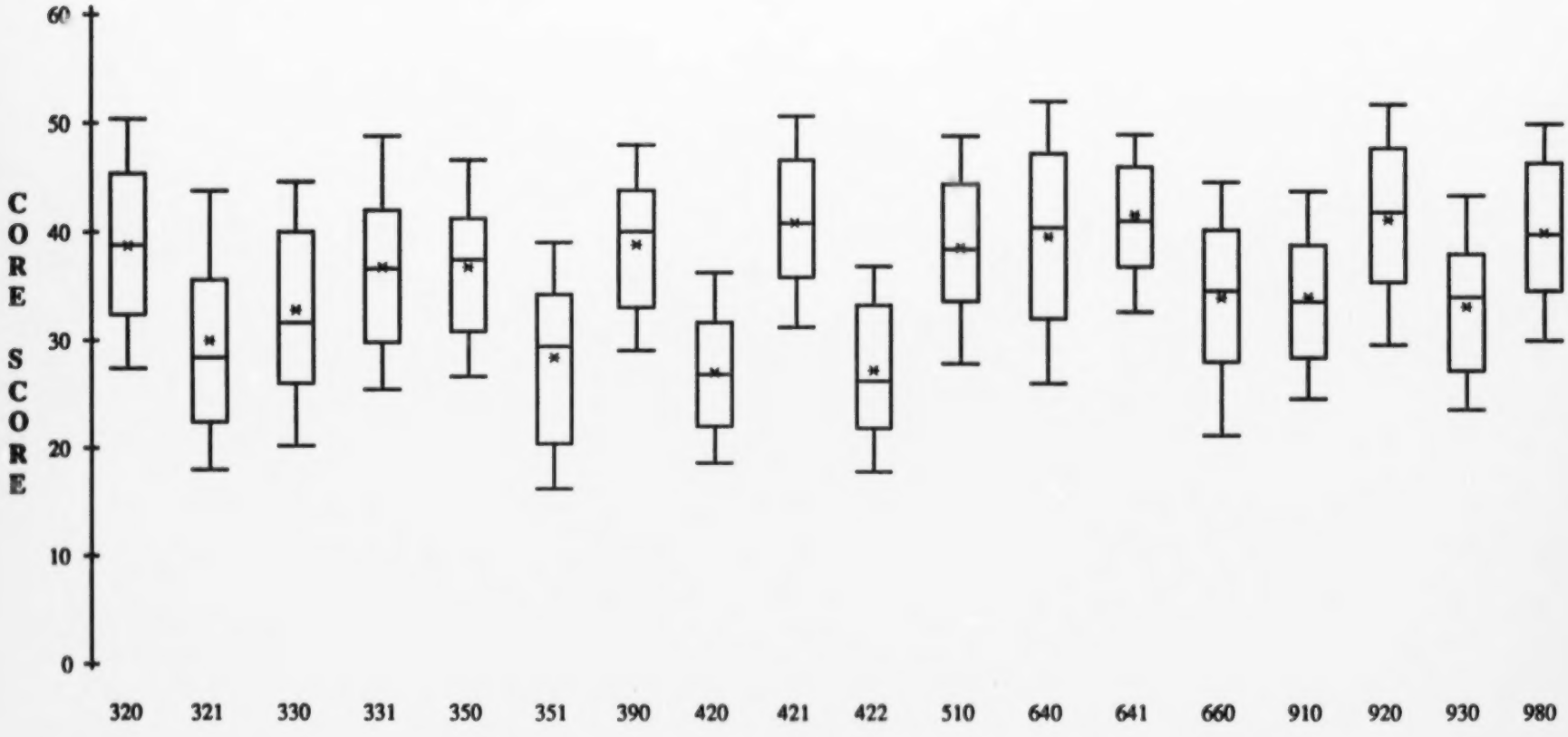
Figure 9. Distributions of Algebra II Core Scores by School Systems in the Southeast Region -- 1989



Southeast Region School Systems:

100 Brunswick Co.	400 Greene Co.	650 New Hanover Co.	820 Sampson Co.
160 Carteret Co.	520 Jones Co.	670 Onslow Co.	821 Clinton City
250 Craven Co.	540 Lenoir Co.	690 Pamlico Co.	960 Wayne Co.
310 Duplin Co.	541 Kinston City	710 Pender Co.	962 Goldsboro City

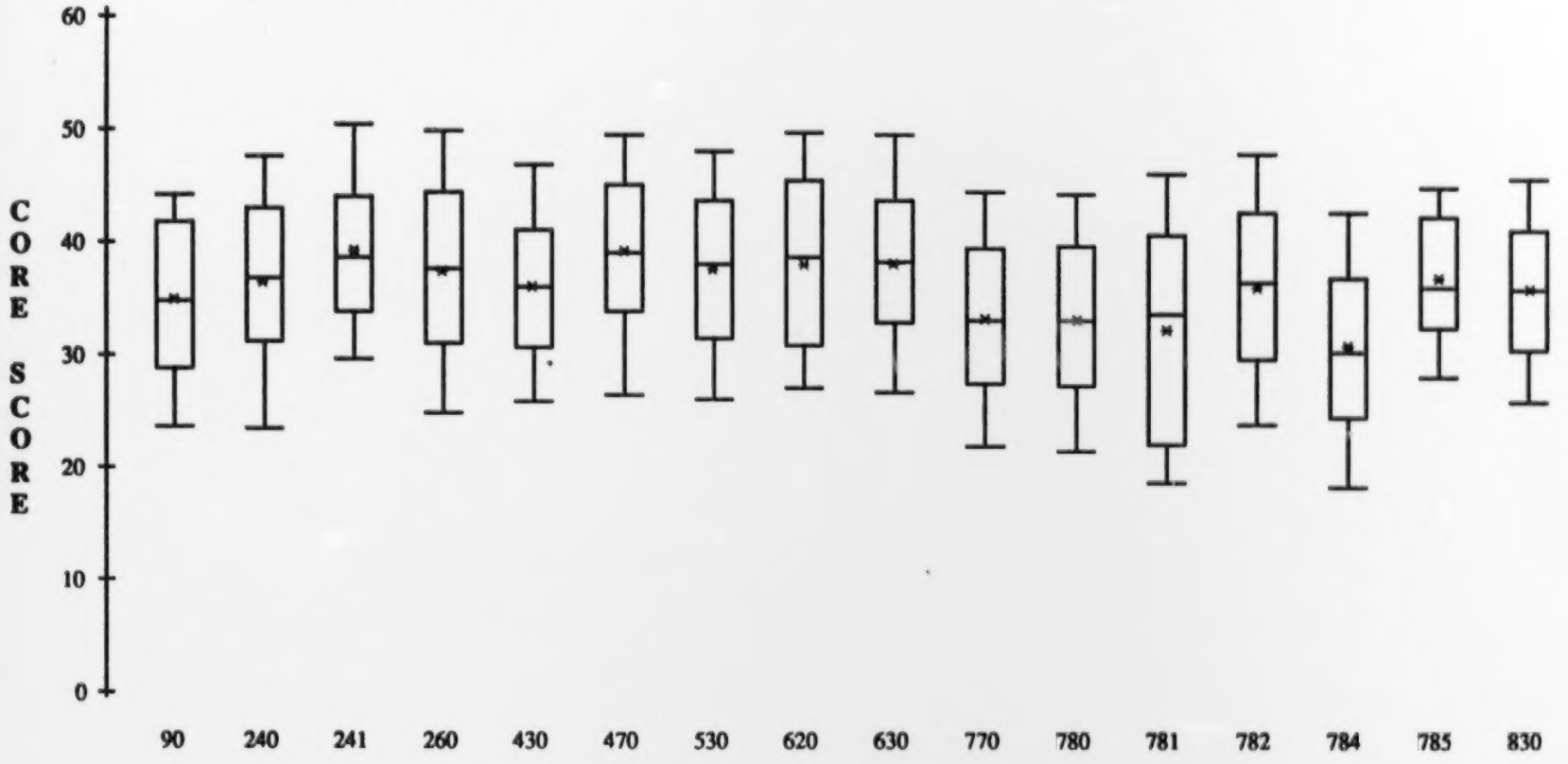
Figure 10. Distributions of Algebra II Core Scores by School System in the Central Region -- 1989



Central Region School Systems:

320 Durham Co.	350 Franklin Co.	421 Roanoke Rapids City	641 Rocky Mount City	930 Warren Co.
321 Durham City	351 Franklinton City	422 Weldon City	660 Northampton Co.	980 Wilson Co.
330 Edgecombe Co.	390 Granville Co.	510 Johnston Co.	910 Vance Co.	
331 Tarboro City	420 Halifax Co.	640 Nash Co.	920 Wake Co.	

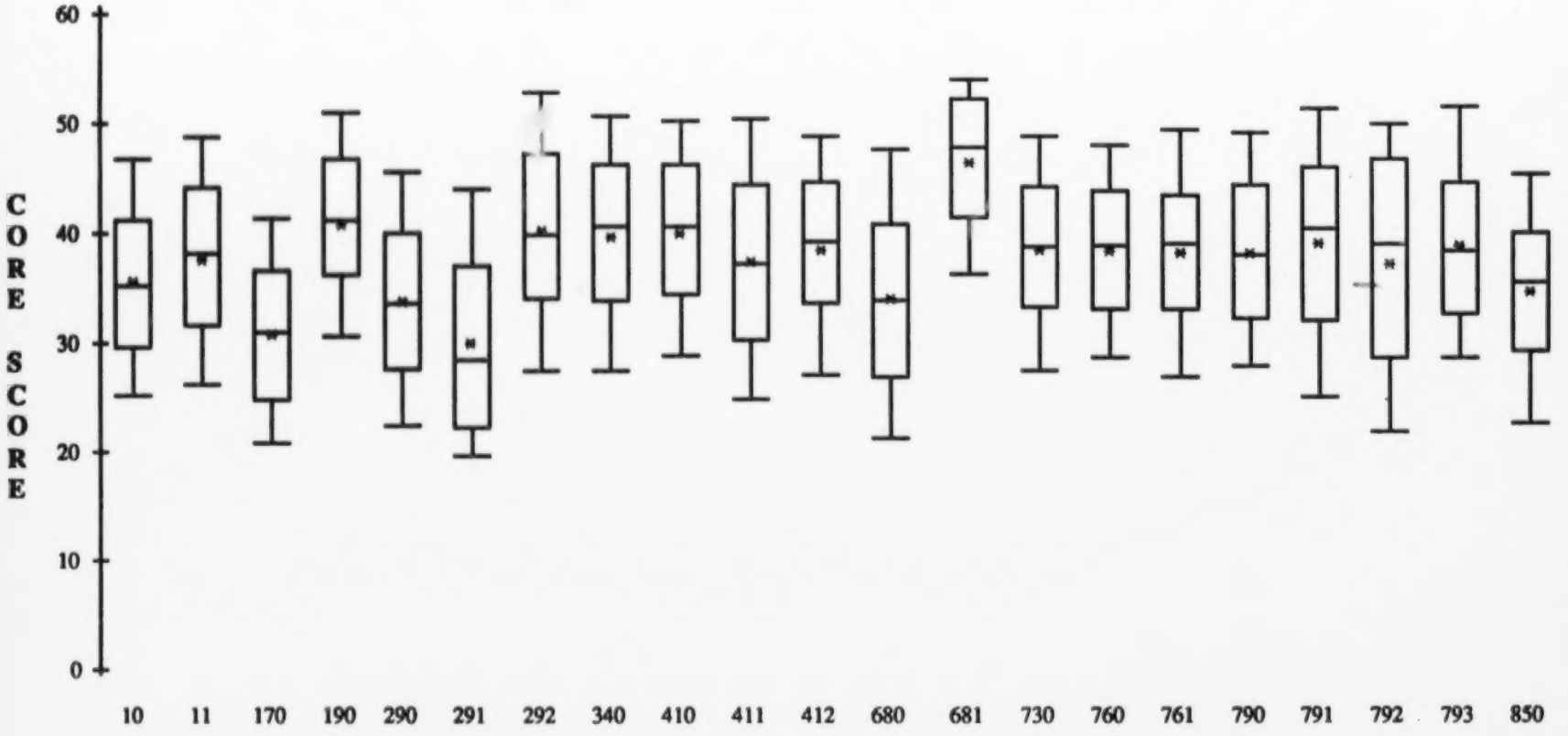
Figure 11. Distributions of Algebra II Core Scores by School Systems in the South Central Region -- 1989



South Central Region School Systems:

90 Bladen Co.	430 Harnett Co.	630 Moore Co.	782 Lumberton City
240 Columbus Co.	470 Hoke Co.	770 Richmond Co.	784 Red Springs City
241 Whiteville City	530 Lee Co.	780 Robeson Co.	785 St. Pauls City
260 Cumberland Co.	620 Montgomery Co.	781 Fairmont City	830 Scotland Co.

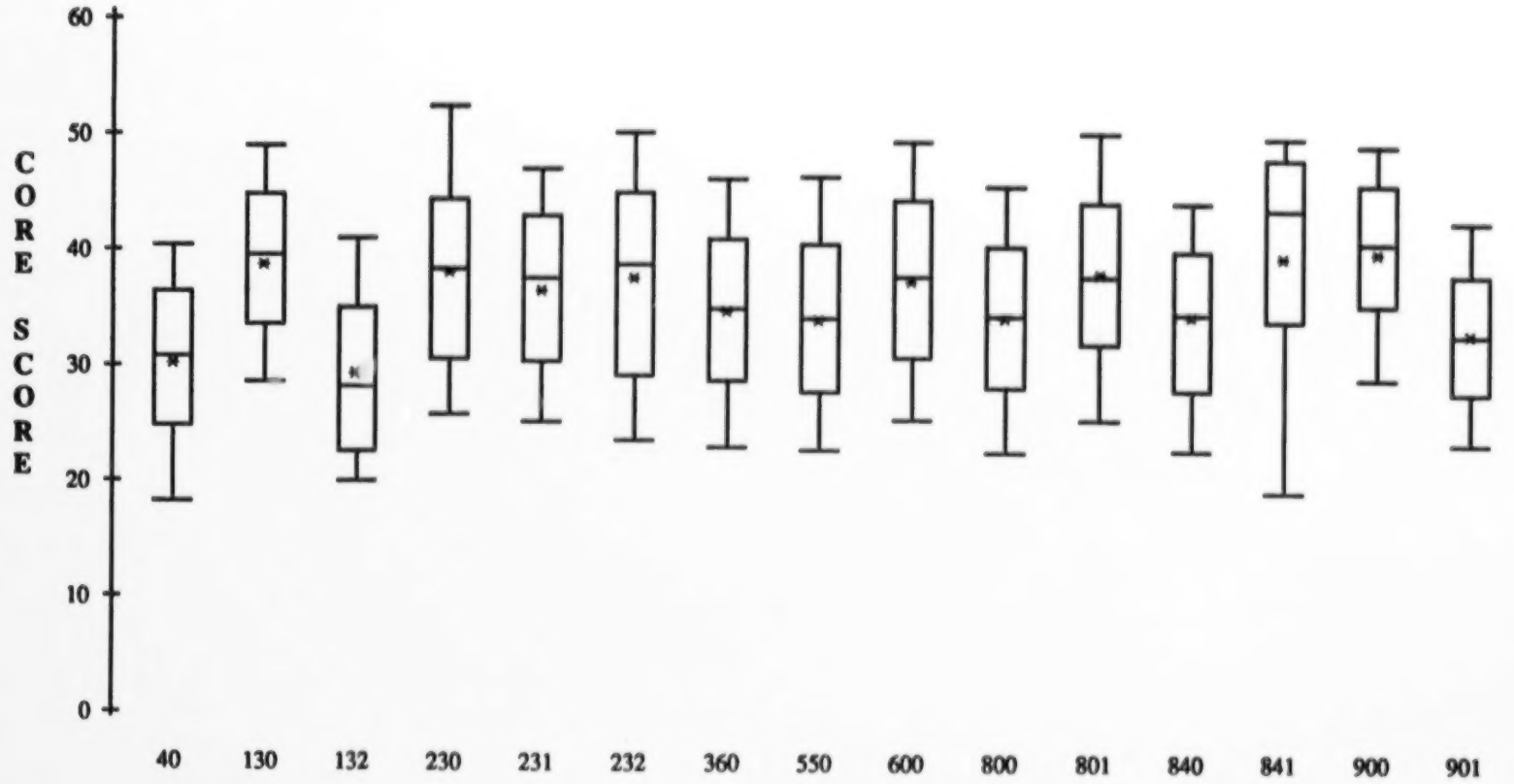
Figure 12. Distributions of Algebra II Core Scores by School Systems in the North Central Region -- 1989



North Central Region School Systems:

10 Alamance Co.	291 Lexington City	412 High Point City	761 Asheboro City	850 Stokes Co.
11 Burlington City	292 Thomasville City	680 Orange Co.	790 Rockingham Co.	
170 Caswell Co.	340 Forsyth Co.	681 Chapel Hill City	791 Eden City	
190 Chatham Co.	410 Guilford Co.	730 Person Co.	792 Western Rockingham City	
290 Davidson Co.	411 Greensboro City	760 Randolph Co.	793 Reidsville City	

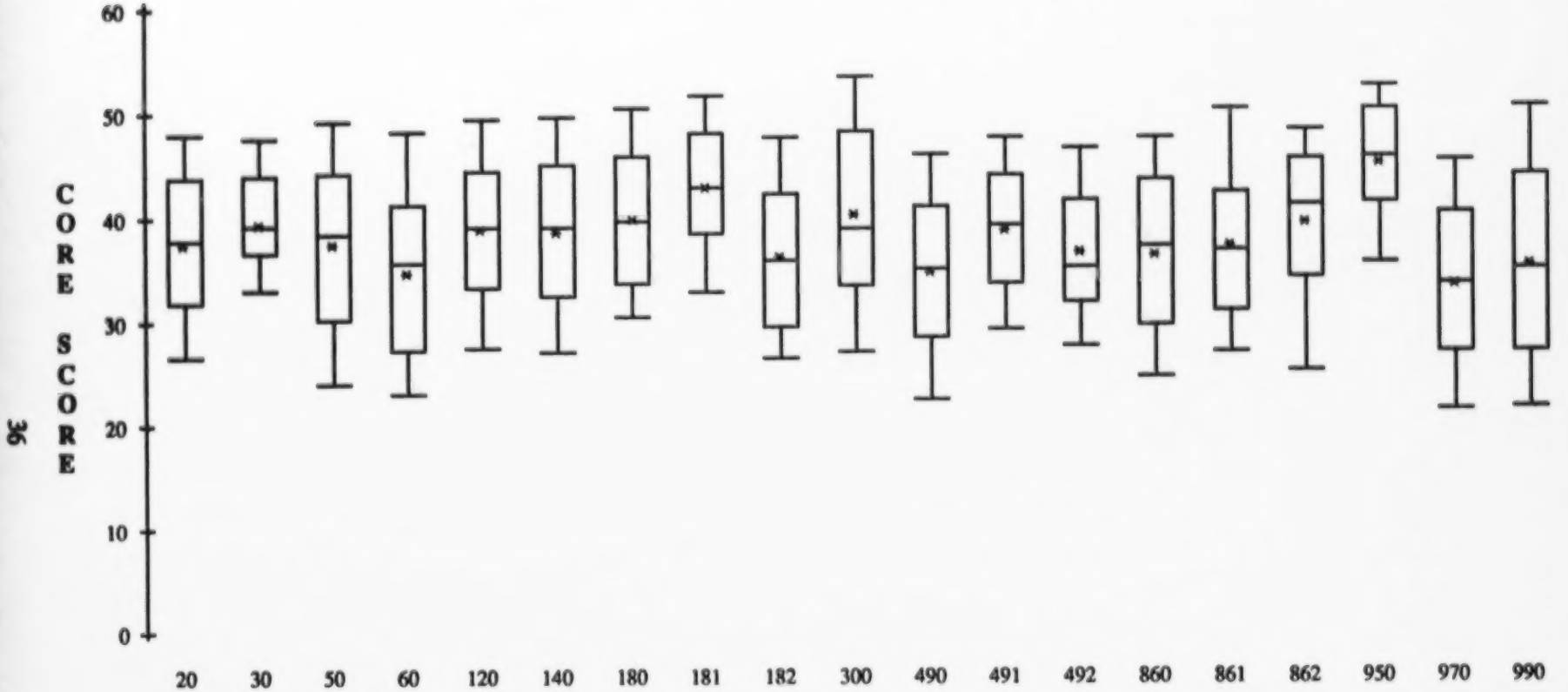
Figure 13. Distributions of Algebra II Core Scores by School Systems in the Southwest Region - 1989



Southwest Region School Systems:

40 Anson Co.
130 Cabarrus Co.
132 Kannapolis City
230 Cleveland Co.
231 Kings Mountain City
232 Shelby City
360 Gaston Co.
550 Lincoln Co.
600 Mecklenburg Co.
800 Rowan Co.
801 Salisbury City
840 Stanley Co.
841 Albemarle City
900 Union Co.
901 Monroe City

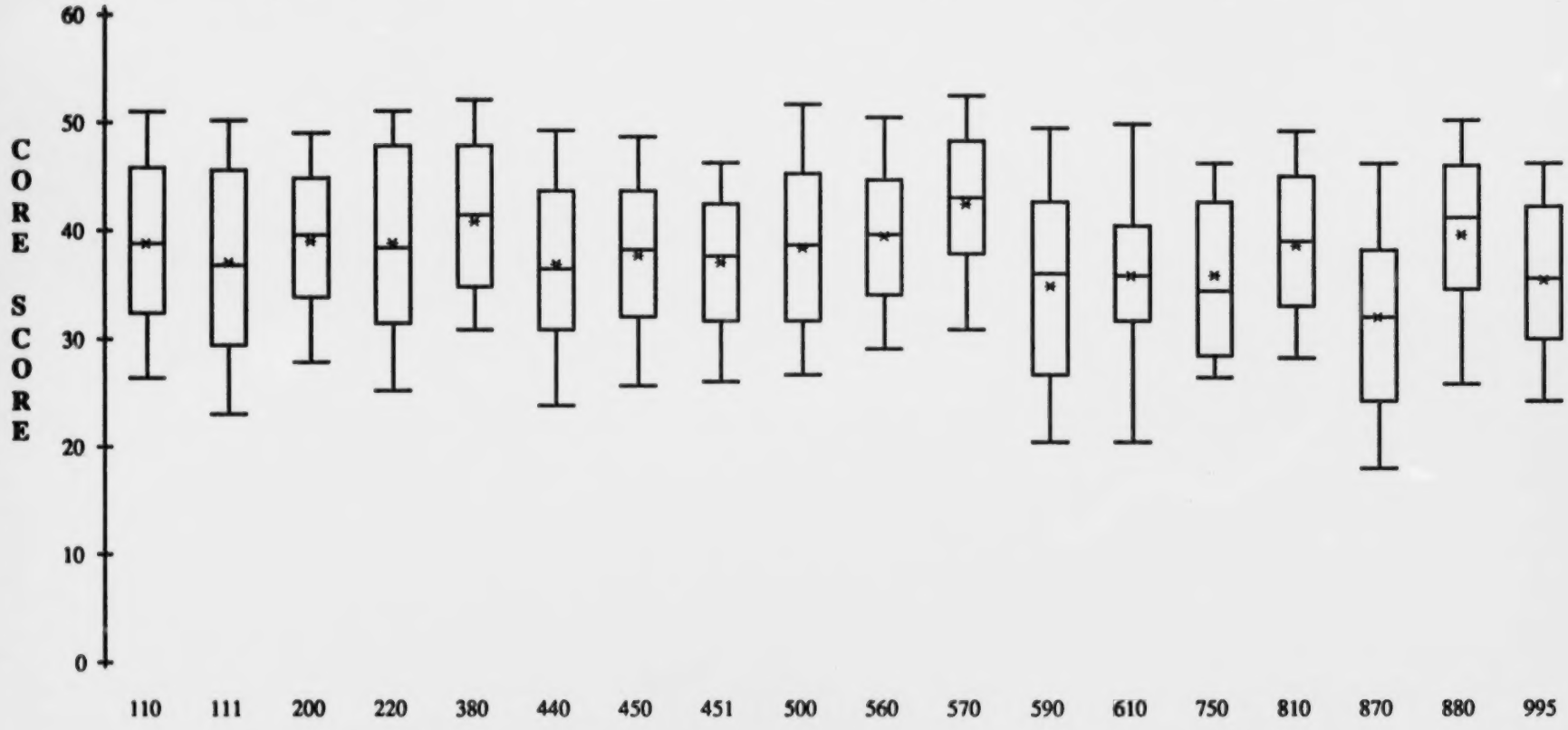
Figure 14. Distributions of Algebra II Core Scores by School Systems in the Northwest Region -- 1989



Northwest Region School Systems:

20 Alexander Co.
30 Alleghany Co.
50 Ashe Co.
60 Avery Co.
120 Burke Co.
140 Caldwell Co.
180 Catawba Co.
181 Hickory City
182 Newton-Conover City
300 Davie Co.
490 Iredell Co.
491 Mooresville City
492 Statesville City
860 Surry Co.
861 Elkin City
862 Mount Airy City
950 Watauga Co.
970 Wilkes Co.
990 Yadkin Co.

Figure 15. Distributions of Algebra II Core Scores by School Systems in the Western Region -- 1989



Western Region School Systems:

110 Buncombe Co.
111 Asheville City
200 Cherokee Co.
220 Clay Co.
380 Graham Co.
440 Haywood Co.
450 Henderson Co.
451 Hendersonville City
500 Jackson Co.
560 Macon Co.
570 Madison Co.
590 McDowell Co.
610 Mitchell Co.
750 Polk Co.
810 Rutherford Co.
870 Swain Co.
880 Transylvania Co.
995 Yancey Co.

TABLE 10
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region Northeast

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Beaufort County	31.9	42.5	24.2	17.8	33.2	28.0	16.6	13.9
Washington City	31.5	51.1	28.7	20.6	37.5	42.6	28.5	25.4
Bertie County	29.8	40.1	21.3	16.0	35.5	21.9	13.9	13.0
Camden County	37.2	43.6	28.9	26.3	36.8	64.3	42.3	40.7
Chowan County	38.1	41.2	28.0	24.2	40.9	31.5	23.0	23.0
Currituck County	43.8	26.4	20.7	20.3	45.0	22.3	17.9	17.9
Dare County	43.2	36.2	27.9	27.6	44.1	34.9	27.5	27.5
Gates County	39.1	55.5	38.7	37.0	41.6	50.9	37.8	37.1
Hertford County	26.4	23.3	11.0	6.0	35.2	27.4	17.2	14.8
Hyde County	37.7	31.2	21.0	19.2	37.3	24.3	16.2	16.2
Martin County	31.5	39.6	22.3	16.5	33.7	38.4	23.1	19.3
Pasquotank County	36.3	52.2	33.8	29.1	36.4	33.7	21.9	19.9
Perquimans County	40.4	37.3	26.9	25.9	40.6	40.8	29.6	29.1
Pitt County	37.5	42.4	28.4	26.0	39.6	37.4	26.4	25.5
Tyrrell County	36.8	29.0	19.0	16.9	38.1	39.0	26.5	25.4
Washington County	29.3	38.4	20.1	15.0	33.1	38.4	22.7	19.2

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd.
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region Southeast

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Brunswick County	30.5	26.4	14.4	10.3	37.4	22.4	15.0	14.1
Carteret County	45.8	27.1	22.2	22.0	41.4	35.9	26.5	25.7
Craven County	36.5	34.3	22.4	20.6	39.5	39.6	28.0	27.1
Duplin County	34.9	33.9	21.1	18.4	37.2	40.4	26.8	25.1
Greene County	34.0	22.6	13.7	12.6	38.6	35.2	24.3	23.4
Jones County	27.9	32.6	16.2	9.1	37.0	19.8	13.1	12.5
Lenoir County	33.8	29.6	17.9	15.7	35.8	32.6	20.8	18.9
Kinston City	40.5	36.3	26.2	24.9	39.2	41.2	28.9	28.0
New Hanover County	37.9	52.9	35.8	33.0	38.3	48.4	33.1	31.1
Onslow County	35.3	39.8	25.1	21.5	35.8	38.4	24.6	21.6
Pamlico County	34.3	24.5	15.0	13.5	38.2	23.0	15.7	15.7
Pender County	32.5	24.7	14.3	11.5	35.0	34.7	21.7	20.5
Sampson County	28.8	36.5	18.7	12.7	33.1	28.4	16.8	15.0
Clinton City	41.9	23.7	17.7	17.4	41.0	30.3	22.2	21.6
Wayne County	31.5	40.4	22.8	17.6	34.2	46.0	28.1	24.0
Goldsboro City	29.5	38.1	20.1	14.6	31.3	46.3	25.9	21.2

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd.
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region Central

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Durham County	40.0	50.9	36.3	33.7	39.0	50.8	35.4	34.0
Durham City	26.4	23.1	10.9	5.6	30.1	27.2	14.6	10.5
Edgecombe County	28.9	24.5	12.7	9.2	32.9	23.6	13.9	11.4
Tarboro City	36.6	42.7	27.9	25.2	37.0	40.1	26.5	25.3
Franklin County	32.2	30.0	17.2	13.0	36.9	39.2	25.8	24.9
Franklinton City	29.3	15.3	8.0	6.9	28.7	40.9	20.9	14.5
Granville County	37.9	33.1	22.4	20.9	39.0	30.6	21.3	20.8
Halifax County	25.6	19.9	9.1	4.7	27.3	17.1	8.3	5.7
Roanoke Rapids City	37.3	40.9	27.2	23.8	41.0	47.3	34.6	33.9
Weldon City	21.7	31.5	12.2	5.0	27.4	42.1	20.6	13.9
Johnston County	37.5	40.8	27.3	24.7	38.8	39.0	27.0	26.2
Nash County	35.6	34.7	22.1	19.0	39.7	37.3	26.5	25.0
Rocky Mount City	41.7	41.8	31.1	29.6	41.2	35.4	26.1	25.9
Northampton County	30.7	35.0	19.2	14.5	34.3	43.7	26.7	23.2
Vance County	35.5	33.2	21.0	18.4	34.1	29.8	18.2	16.8
Wake County	40.6	61.4	44.5	42.2	41.3	57.8	42.7	41.6
Warren County	35.0	17.5	10.9	9.3	33.5	18.4	11.0	10.0
Wilson County	37.6	32.3	21.7	19.3	40.2	29.1	20.9	20.4

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd.
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region South Central

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Bladen County	29.4	30.1	15.8	10.6	35.0	37.6	23.5	21.2
Columbus County	31.5	22.1	12.4	9.1	36.8	24.3	16.0	14.4
Whiteville City	37.3	54.7	36.4	33.6	39.3	46.0	32.3	32.3
Cumberland County	37.0	39.4	26.0	23.0	37.5	43.0	28.8	26.5
Harnett County	36.0	25.3	16.3	14.4	36.1	30.1	19.4	18.3
Hoke County	33.5	37.0	22.1	17.9	39.2	22.6	15.8	15.3
Lee County	36.4	40.0	26.0	23.9	37.5	44.5	29.8	28.3
Montgomery County	38.1	39.9	27.1	23.8	38.0	34.7	23.6	21.8
Moore County	35.9	34.6	22.2	18.9	38.1	33.0	22.5	21.6
Richmond County	30.2	36.8	19.8	14.4	33.3	22.8	13.6	11.9
Robeson County	29.4	20.6	10.8	7.5	33.1	20.1	11.9	10.1
Fairmont City	30.9	32.3	17.8	11.9	32.2	38.6	22.2	15.4
Lumberton City	32.2	52.3	30.1	23.3	36.0	43.0	27.7	25.1
Red Springs	26.1	26.4	12.3	6.2	30.9	31.8	17.5	13.9
Saint Pauls City	36.1	21.9	14.1	12.6	36.7	31.0	20.3	19.8
Scotland County	35.3	43.0	27.1	24.0	35.9	36.7	23.5	22.6

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd.
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region North Central

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Alamance County	33.5	44.7	26.7	22.2	35.5	43.1	27.3	25.6
Burlington City	38.9	58.7	40.7	37.9	37.6	63.2	42.5	39.7
Caswell County	30.1	27.8	14.9	11.0	30.8	34.0	18.7	15.1
Chatham County	40.4	35.4	25.5	24.1	40.8	37.3	27.2	26.0
Davidson County	30.3	47.0	25.4	17.6	33.9	40.9	24.7	21.7
Lexington City	30.0	38.6	20.7	13.6	30.1	45.8	24.6	16.8
Thomasville City	37.6	32.4	21.8	18.6	40.2	24.4	17.5	17.2
Forsyth County	38.8	49.0	33.9	31.3	39.7	47.4	33.6	32.3
Guilford County	39.9	47.6	33.9	32.6	40.0	51.2	36.6	35.4
Greensboro City	36.3	59.9	38.8	33.2	37.4	52.5	35.1	32.2
High Point City	37.8	35.7	24.1	23.2	38.5	32.6	22.4	20.9
Orange County	32.8	38.8	22.7	18.2	33.9	41.9	25.4	21.5
Chapel Hill City	49.5	55.9	49.4	49.4	46.4	68.9	57.1	57.1
Person County	40.3	36.4	26.2	24.9	38.4	44.6	30.5	29.0
Randolph County	36.4	30.9	20.1	18.4	38.4	29.1	19.9	19.5
Asheboro City	37.6	47.6	32.0	27.9	38.1	50.0	34.0	31.9
Rockingham County	36.2	37.8	24.4	21.8	38.2	29.9	20.4	19.2
Eden City	39.4	45.1	31.7	29.4	39.1	33.2	23.2	22.3
West. Rockingham	37.8	30.5	20.6	18.7	37.3	36.3	24.2	21.3
Reidsville City	38.2	31.3	21.3	20.4	38.9	34.4	23.9	23.9
Stokes County	34.0	37.4	22.7	18.8	34.6	41.9	25.9	22.6

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd.
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region Southwest

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Anson County	29.2	48.1	25.1	17.7	30.3	33.4	18.1	14.6
Cabarrus County	38.1	45.6	31.0	27.6	38.9	49.5	34.4	32.9
Kannapolis City	28.9	45.3	23.4	15.2	29.5	49.9	26.3	18.9
Cleveland County	36.4	34.3	22.3	19.5	38.2	32.9	22.4	21.0
Kings Mountain City	35.7	31.7	20.2	17.3	36.6	33.2	21.7	20.9
Shelby City	35.0	62.1	38.9	31.2	37.5	52.2	35.0	31.8
Gaston County	33.2	33.6	19.9	16.3	34.8	41.7	25.9	23.1
Lincoln County	32.5	41.2	23.9	19.3	34.2	37.1	22.7	20.2
Mecklenburg County	35.9	46.6	29.8	25.7	37.5	48.0	32.1	30.1
Rowan County	34.0	51.2	31.1	25.8	34.3	51.1	31.3	27.5
Salisbury City	30.8	54.6	30.0	21.9	38.0	57.9	39.3	36.9
Stanly County	33.0	25.4	15.0	12.5	34.4	37.5	23.0	20.4
Albemarle City	38.8	33.1	23.0	19.5	39.5	39.8	28.1	23.8
Union County	36.2	30.0	19.4	17.4	40.1	33.6	24.0	22.9
Monroe City	36.4	42.5	27.6	23.1	33.1	42.0	24.8	22.2

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd.
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

Region Northwest

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Alexander County	34.3	42.4	26.0	22.1	37.5	44.5	29.8	28.1
Alleghany County	37.8	29.7	20.0	18.6	39.4	35.7	25.1	24.0
Ashe County	38.2	42.3	28.8	25.9	37.3	40.3	26.9	24.5
Avery County	30.0	34.8	18.7	13.6	34.6	27.7	17.1	14.9
Burke County	36.9	36.1	23.8	21.3	38.7	34.8	24.1	23.1
Caldwell County	37.3	32.4	21.6	19.2	38.7	26.8	18.5	17.8
Catawba County	39.7	47.3	33.5	32.0	39.8	43.0	30.5	30.2
Hickory City	42.1	41.5	31.2	30.5	42.7	39.4	30.1	30.1
Newton City	33.7	39.9	24.0	19.3	36.3	39.0	25.3	23.9
Davie County	37.4	38.1	25.4	21.6	40.1	38.8	27.8	26.6
Iredell County	31.2	40.1	22.3	16.5	34.7	38.6	23.9	20.9
Mooresville City	31.8	57.0	32.4	25.3	38.7	61.9	42.8	41.9
Statesville City	38.4	48.9	33.5	30.3	36.6	45.1	29.5	29.0
Surry County	33.8	28.0	16.9	14.7	36.4	28.7	18.6	17.0
Elkin City	35.2	70.1	44.1	36.7	37.1	71.4	47.3	44.9
Mount Airy City	34.6	48.2	29.8	25.3	39.3	51.1	35.9	33.7
Watauga County	44.3	38.4	30.4	30.2	45.1	44.4	35.8	35.8
Wilkes County	30.6	33.3	18.2	13.4	33.6	37.8	22.7	19.0
Yadkin County	35.4	33.1	21.0	17.6	35.4	35.6	22.5	19.2

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

TABLE 10, cont'd
North Carolina End-of-Course Testing Program
Core Performance, Participation Rate, Yield, and Effective Yield
Algebra II: 1988-1989

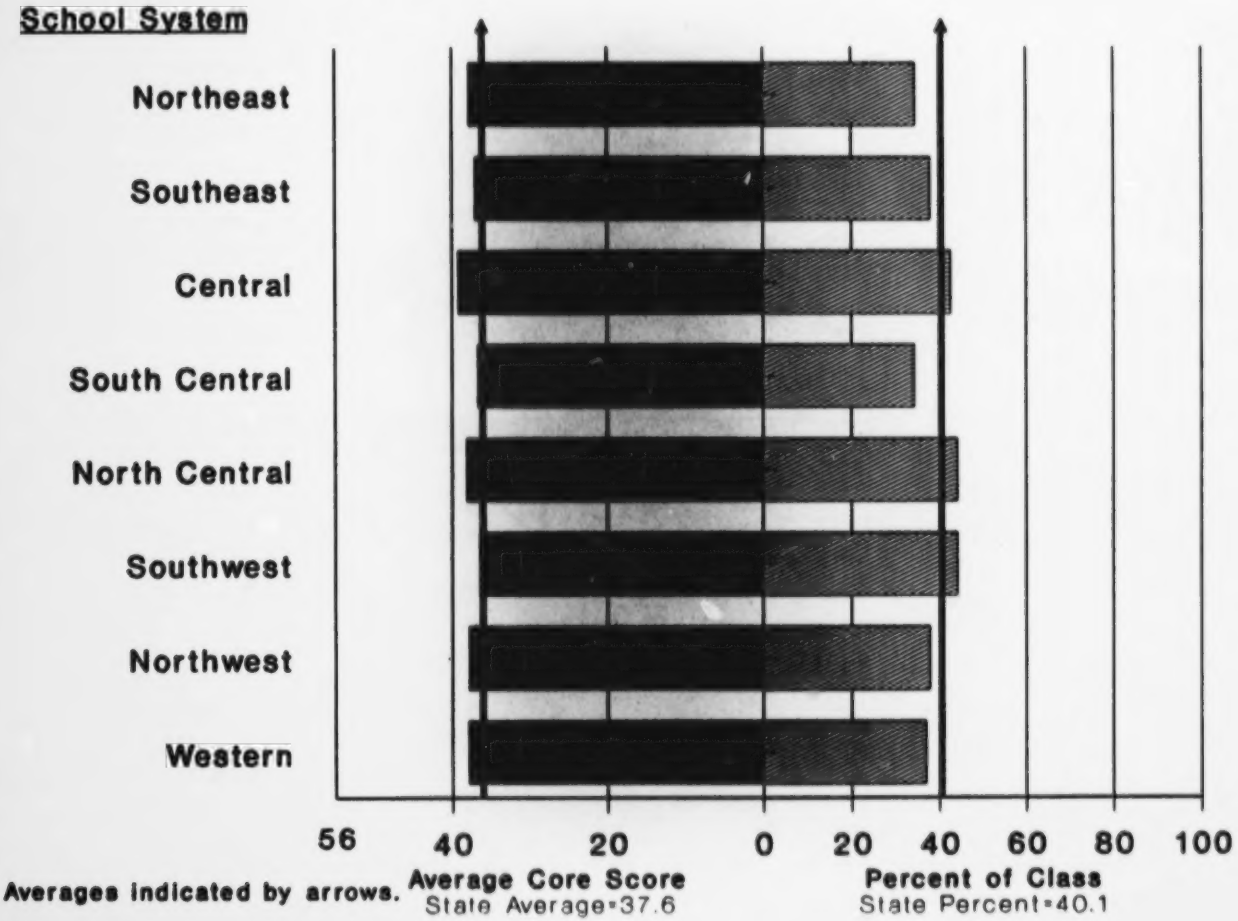
Region Western

School System	1988 Average Core	1988 Percent of Class	1988 Yield	1988 Effective Yield	1989 Average Core	1989 Percent of Class	1989 Yield	1989 Effective Yield
Buncombe County	37.8	41.2	27.8	24.3	38.8	42.2	29.2	27.7
Asheville City	33.5	63.7	38.1	30.0	37.0	43.4	28.7	25.5
Cherokee County	30.9	39.3	21.7	14.4	38.9	31.8	22.1	21.7
Clay County	39.4	28.0	19.7	18.5	38.9	26.4	18.3	17.0
Graham County	36.9	41.8	27.5	23.2	40.9	57.0	41.6	40.2
Haywood County	36.1	40.1	25.9	23.0	36.9	37.5	24.7	22.5
Henderson County	37.2	53.1	35.2	31.6	37.7	43.1	29.0	26.7
Hendersonville City	35.9	71.0	45.5	41.2	37.0	68.4	45.2	43.0
Jackson County	36.1	51.4	33.1	28.7	38.3	47.2	32.3	30.7
Macon County	39.9	43.7	31.2	29.6	39.4	35.0	24.6	23.9
Madison County	39.8	24.0	17.0	16.2	42.3	19.5	14.7	14.2
McDowell County	34.1	35.4	21.5	16.9	34.7	31.3	19.4	15.5
Mitchell County	30.9	32.4	17.9	13.4	35.8	35.2	22.5	20.0
Polk County	31.5	27.3	15.4	12.4	35.8	32.3	20.6	19.8
Tryon City	34.9	48.3	30.1	27.0				
Rutherford County	38.2	27.2	18.6	17.2	38.6	25.5	17.6	16.8
Swain County	35.4	30.2	19.1	16.9	32.1	32.1	18.4	14.9
Transylvania County	33.7	34.5	20.8	18.5	39.6	33.3	23.6	21.5
Yancey County	36.5	38.5	25.1	21.6	35.4	31.9	20.2	18.8

Note: *Percent of class* is an estimate of Algebra II participation calculated by dividing the total number of Algebra II students by the number of students in the ninth grade class. *Yield* is an index of the effectiveness of an Algebra II program which combines participation and performance. It is calculated by multiplying the percent of a class taking Algebra II by the percent of core items answered correctly and then multiplying by 100. *Effective yield* is a similar index which counts as 'participating' in Algebra II only those students whose achievement is estimated to be passing.

Figure 16

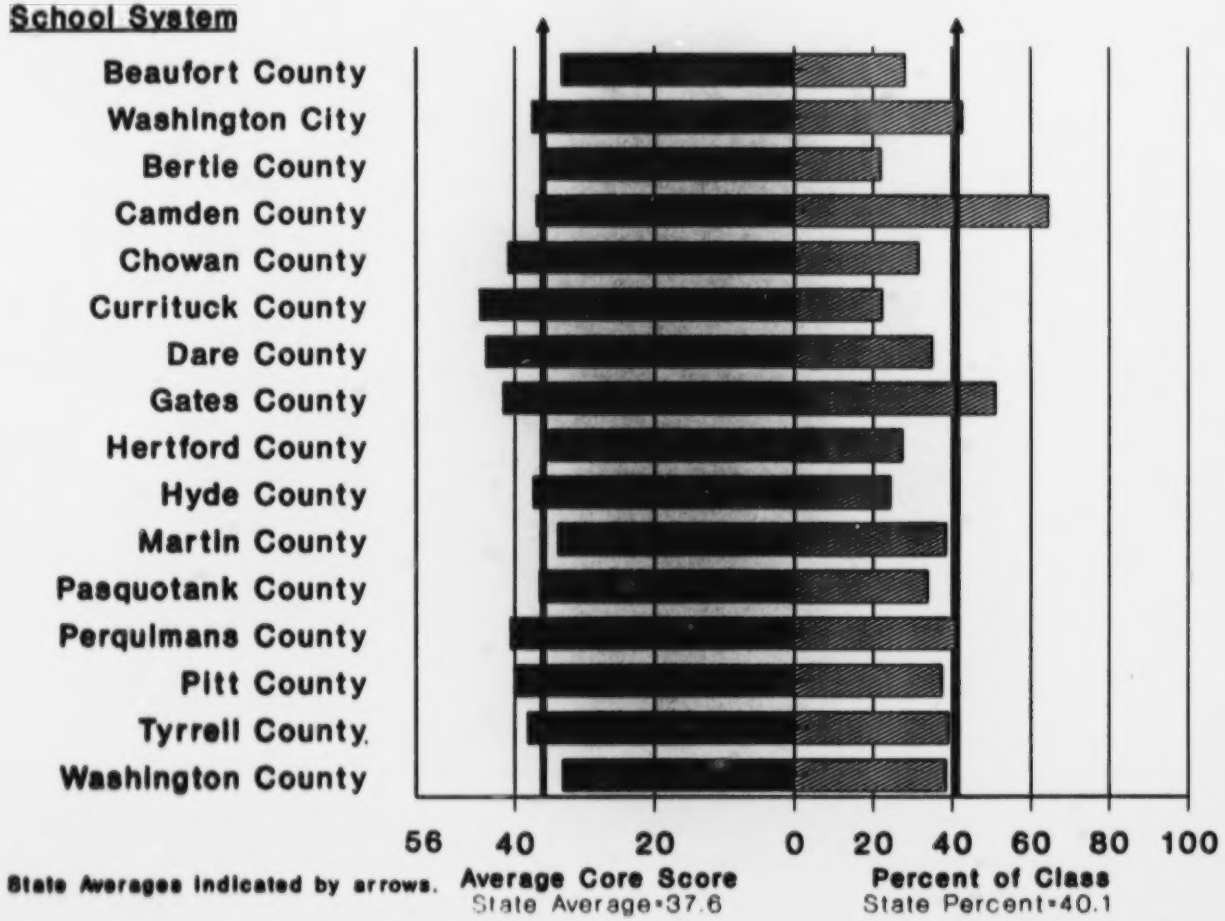
Algebra II Core Scores and Participation Rates by Region--1989



State Averages indicated by arrows.

Figure 17

Algebra II Core Scores and Participation Rates in the Northeast Region--1989



State Averages indicated by arrows.

Figure 18

Algebra II Core Scores and Participation Rates in the Southeast Region--1989

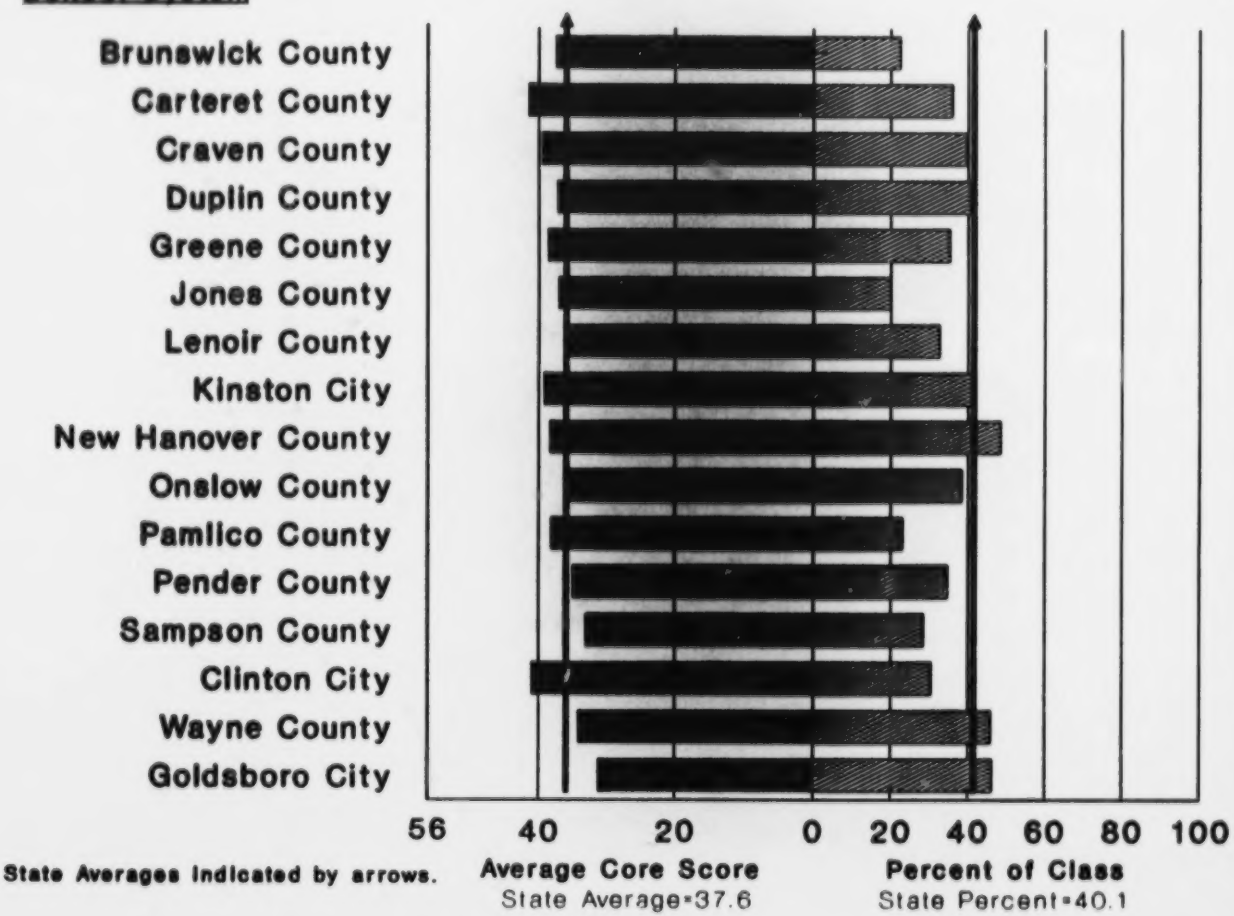
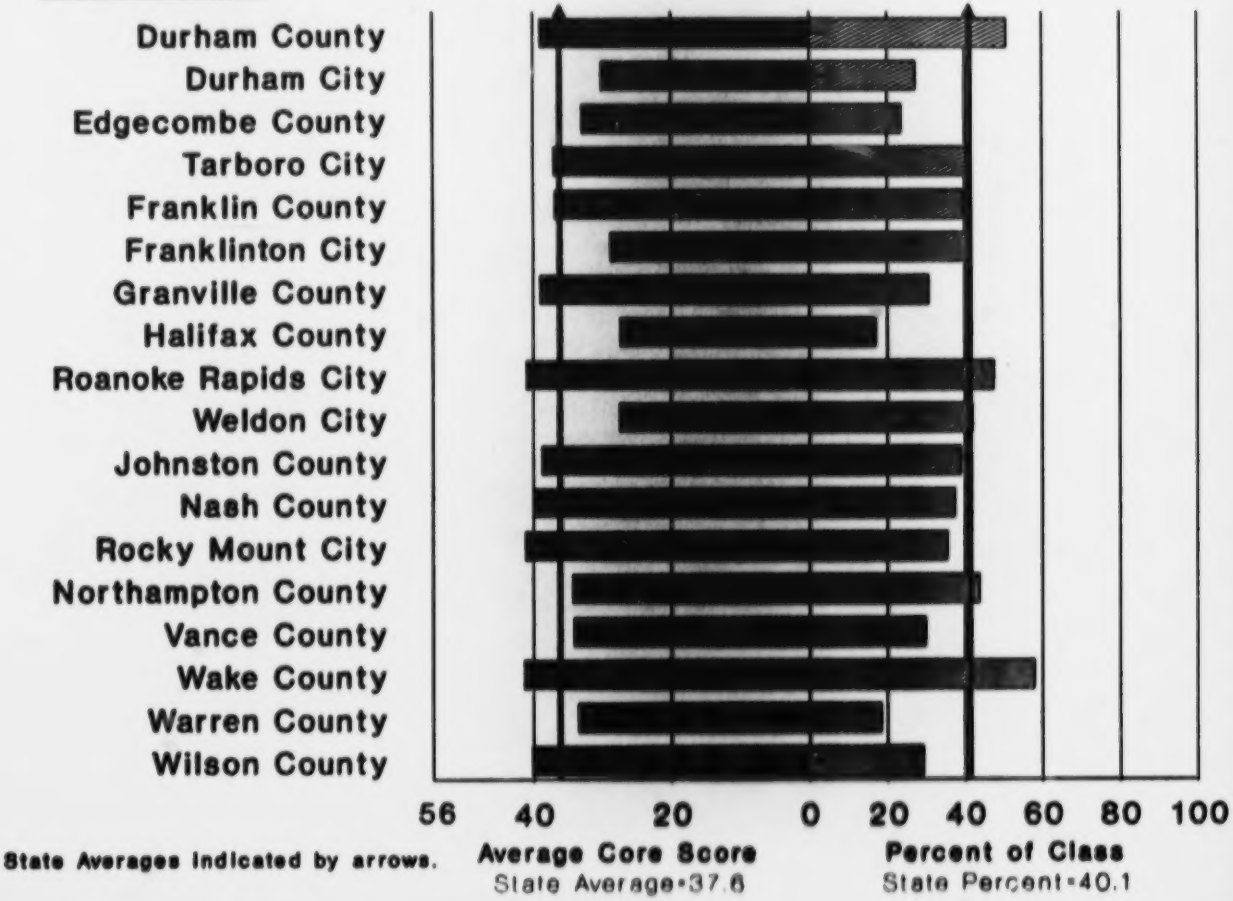


Figure 19

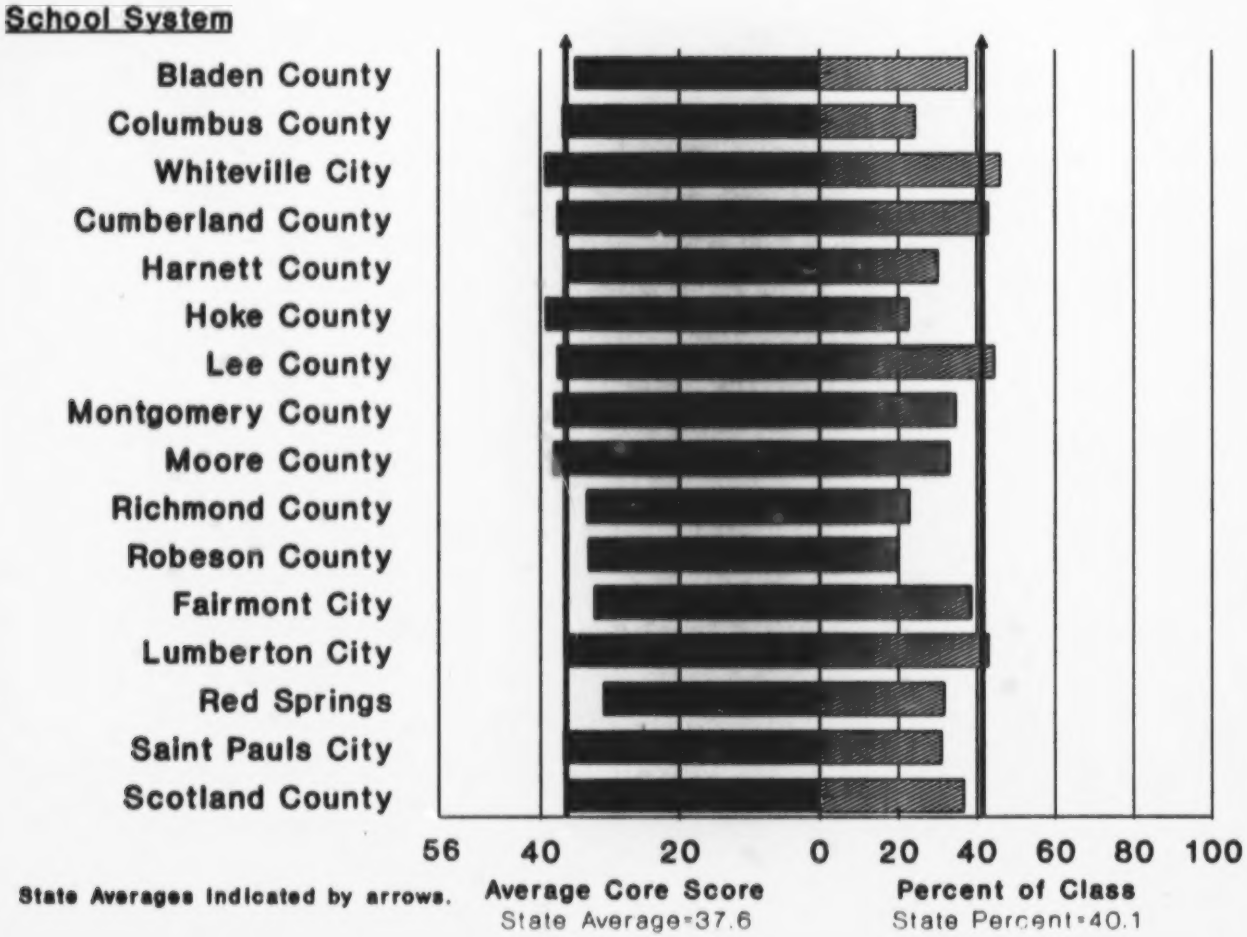
Algebra II Core Scores and Participation Rates in the Central Region--1989



State Averages indicated by arrows.

Figure 20

Algebra II Core Scores and Participation Rates in the South Central Region--1989



State Averages indicated by arrows.

Figure 21

Algebra II Core Scores and Participation Rates in the North Central Region--1989

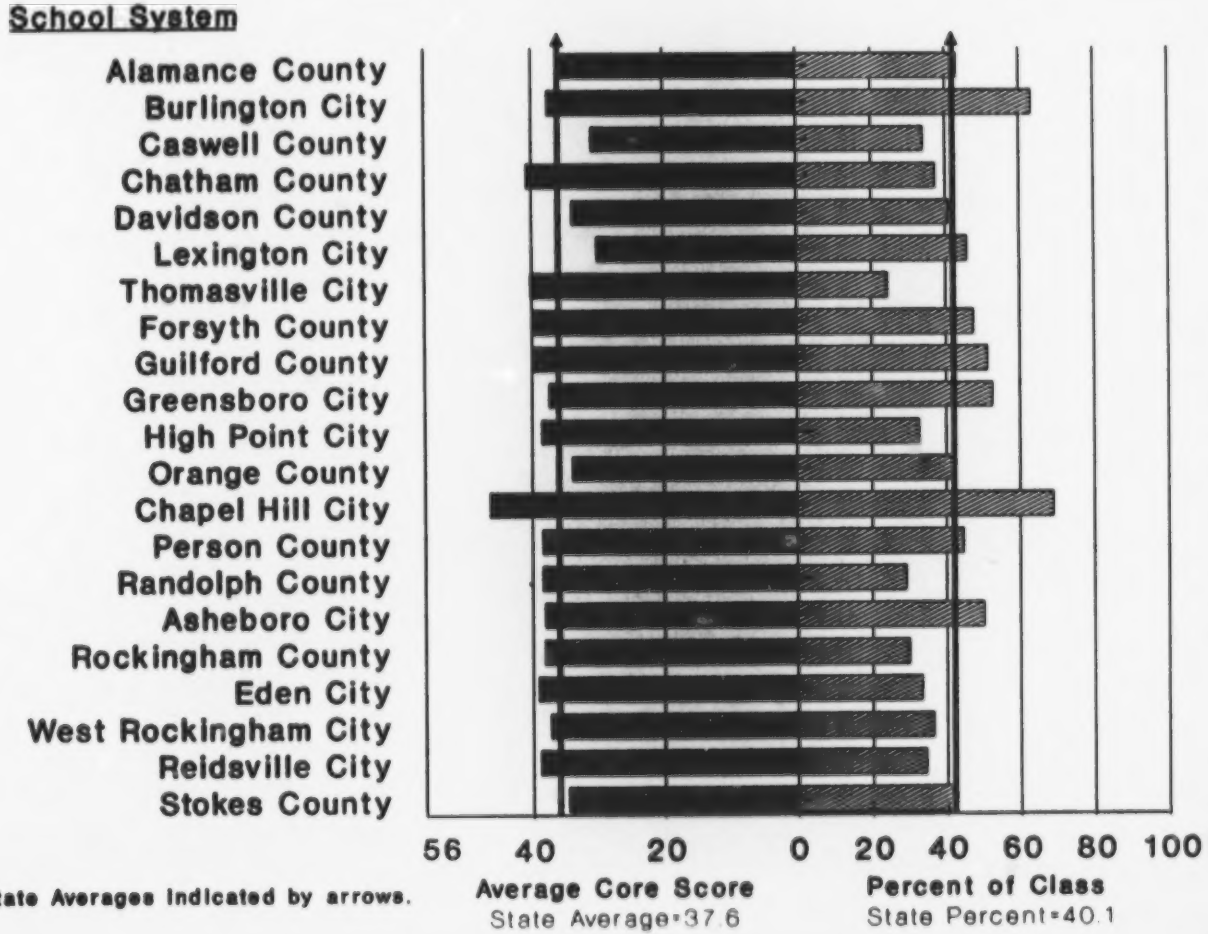


Figure 22
Algebra II Core Scores and Participation Rates in the Southwest Region--1989

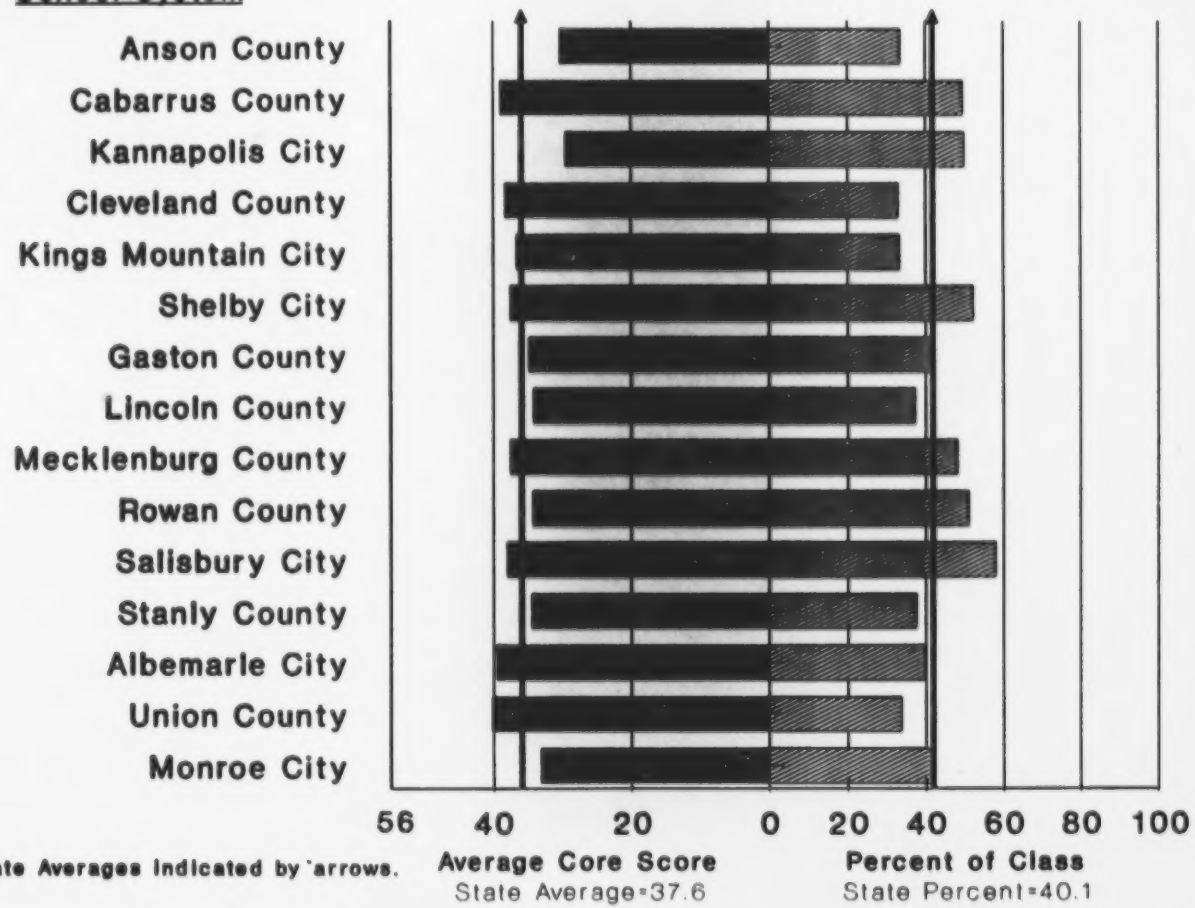


Figure 23

Algebra II Core Scores and Participation Rates in the Northwest Region--1989

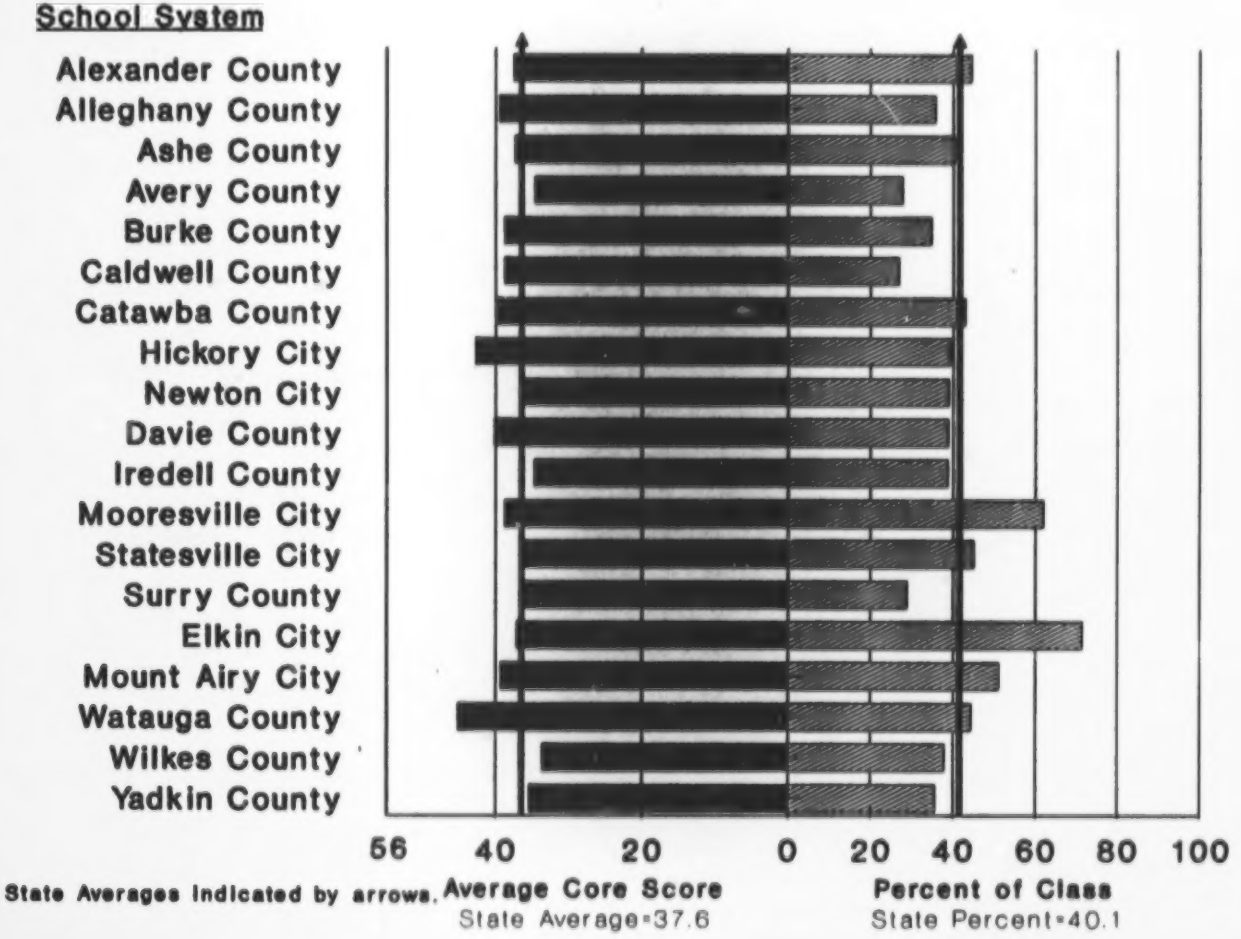
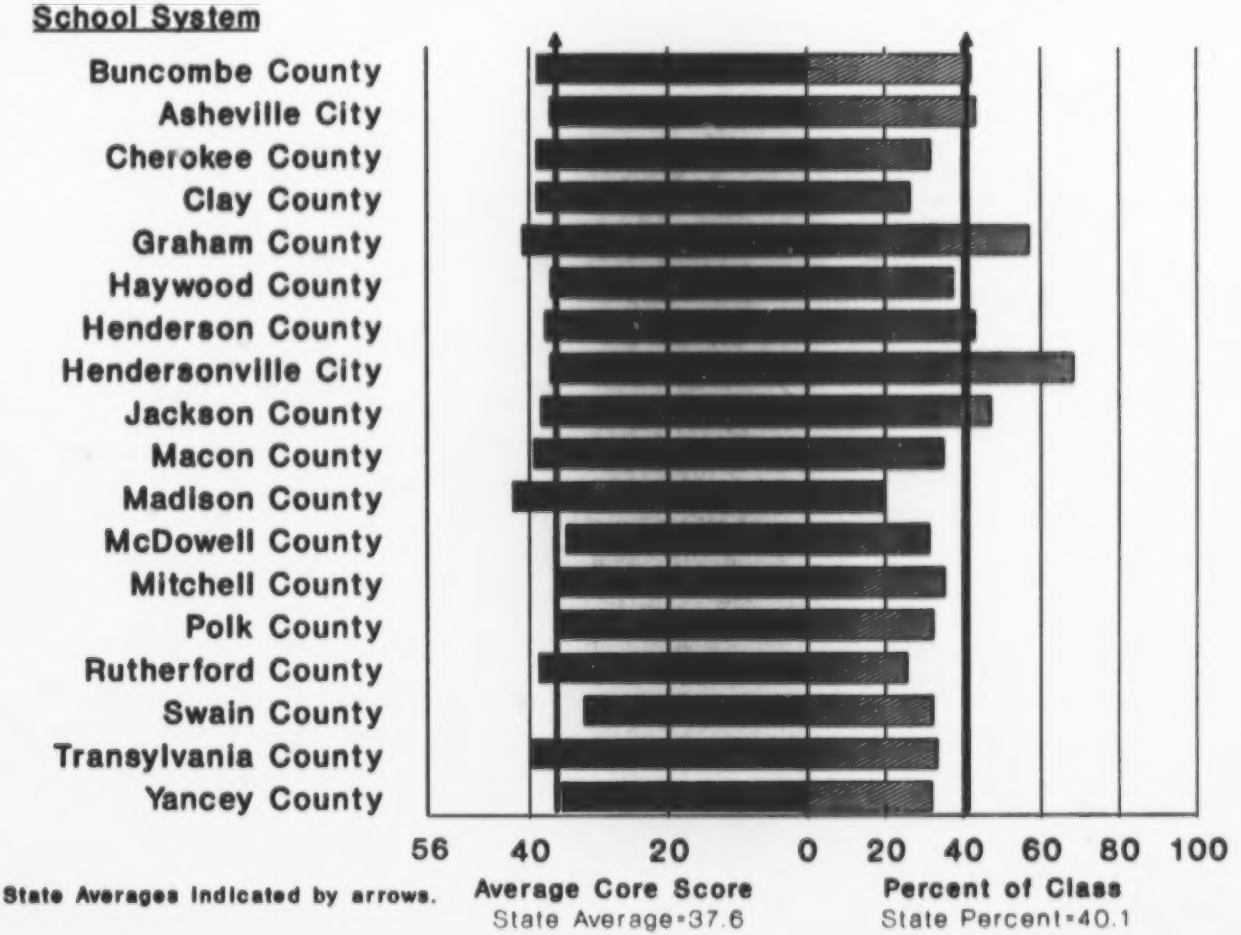


Figure 24

Algebra II Core Scores and Participation Rates in the Western Region--1989



State Averages indicated by arrows.

Table 11

Select Characteristics of Algebra II Students in Public School Systems: 1989

REGION NORTHEAST REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
BEAUFORT COUNTY	93	28.0	0.6	27.3	42.1	28.0	11.5	6.5
WASHINGTON CITY	118	42.6	5.4	25.5	43.8	16.2	20.8	7.6
BERTIE COUNTY	91	21.9	9.8	16.8	76.8	53.9	32.0	15.9
CAMDEN COUNTY	54	64.3	27.6	20.3	30.7	35.2	11.1	1.9
CHOWAN COUNTY	67	31.5	11.7	15.6	50.7	40.3	13.7	6.0
CURRITUCK COUNTY	44	22.3	5.8	9.9	14.5	4.5	23.4	9.1
DARE COUNTY	82	34.9	8.8	23.1	5.2	2.4	10.9	1.2
GATES COUNTY	54	50.9	10.7	23.2	55.3	33.3	15.7	3.7
HERTFORD COUNTY	108	27.4	6.7	24.0	74.2	63.0	21.7	5.6
HYDE COUNTY	17	24.3	1.3	22.6	47.3	29.4	5.6	23.5
MARTIN COUNTY	193	38.4	11.2	31.7	55.1	47.2	21.6	10.4
PASQUOTANK COUNTY	141	33.7	8.1	24.2	45.4	38.6	10.5	4.3
PERQUIMANS COUNTY	53	40.8	0.0	35.0	43.5	36.5	16.7	13.2
PITT COUNTY	518	37.4	14.7	21.6	50.1	32.8	16.4	3.3
TYRRELL COUNTY	23	39.0	0.0	26.0	50.1	43.5	20.7	17.4
WASHINGTON COUNTY	84	38.4	6.9	27.6	61.1	44.0	24.1	8.3

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

REGION SOUTHEAST

REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
BRUNSWICK COUNTY	181	22.4	10.1	17.0	26.9	25.4	14.2	6.1
CARTERET COUNTY	222	35.9	8.1	21.3	13.3	6.8	15.4	3.7
NEW BERN-CRAVEN	444	39.6	8.5	30.9	36.7	21.0	9.2	2.5
DUPLIN COUNTY	253	40.4	15.9	19.6	43.4	31.3	12.3	6.3
GREENE COUNTY	83	35.2	9.9	23.2	60.9	44.6	39.3	7.2
JONES COUNTY	23	19.8	1.7	19.2	53.7	39.1	12.5	13.0
LENOIR COUNTY	182	32.6	12.0	24.0	33.4	20.6	17.3	5.5
KINSTON CITY	169	41.2	7.9	26.3	77.1	57.4	17.9	5.3
NEW HANOVER COUNTY	722	48.4	13.0	21.5	30.7	16.0	10.8	2.7
ONSLOW COUNTY	498	38.4	8.6	24.1	23.5	17.8	11.3	6.4
PAMLICO COUNTY	43	23.0	6.5	20.1	35.8	26.2	7.1	0.0
PENDER COUNTY	135	34.7	4.8	22.9	42.4	30.4	14.8	4.4
SAMPSON COUNTY	171	28.4	1.3	31.8	39.5	37.3	12.8	2.4
CLINTON CITY	76	30.3	8.9	22.8	48.0	36.0	8.5	3.9
WAYNE COUNTY	466	46.0	15.0	19.0	29.1	20.9	15.3	3.0
GOLDSBORO CITY	144	46.3	8.4	23.6	82.3	68.8	12.3	6.9

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

REGION CENTRAL — REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
DURHAM COUNTY	737	50.8	9.9	30.9	31.3	19.6	7.3	1.8
DURHAM CITY	181	27.2	3.7	27.6	90.4	89.4	18.7	6.1
EDGECOMBE COUNTY	118	23.6	0.3	22.3	59.3	58.1	25.6	10.3
TARBORO CITY	110	40.1	9.7	33.3	55.4	30.9	16.4	4.5
FRANKLIN COUNTY	169	39.2	19.1	26.5	43.2	28.4	11.0	11.8
FRANKLINTON CITY	52	40.9	11.6	27.0	61.4	50.0	44.3	21.2
GRANVILLE COUNTY	178	30.6	10.1	12.1	47.5	38.2	17.7	8.5
HALIFAX COUNTY	111	17.1	9.7	15.2	84.0	87.3	31.4	20.4
ROANOKE RAPIDS CITY	98	47.3	9.4	26.9	10.5	6.1	10.9	4.1
WELDON CITY	40	42.1	0.0	28.3	88.8	87.5	36.1	25.0
JOHNSTON COUNTY	471	39.0	10.0	27.2	25.2	15.5	16.5	5.4
NASH COUNTY	338	37.3	4.0	28.0	40.4	21.9	20.1	7.2
ROCKY MOUNT CITY	141	35.4	5.3	15.3	80.3	41.4	22.9	5.7
NORTHAMPTON COUNTY	142	43.7	17.2	19.9	79.7	71.6	27.2	20.0
VANCE COUNTY	155	29.8	4.9	18.9	57.2	31.0	23.8	11.6
WAKE COUNTY	2786	57.8	16.7	31.4	27.1	13.7	7.5	2.1
WARREN COUNTY	56	18.4	6.2	11.9	72.4	73.2	16.9	17.9
WILSON COUNTY	311	29.1	13.3	15.0	51.3	29.6	21.2	3.2

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

REGION SOUTH CENTRAL REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
BLADEN COUNTY	184	37.6	3.8	27.6	50.8	37.7	15.6	6.0
COLUMBUS COUNTY	161	24.3	4.4	20.1	39.1	31.3	20.3	6.8
WHITEVILLE CITY	92	46.0	8.2	21.9	40.2	30.4	18.3	4.3
CUMBERLAND COUNTY	1453	43.0	9.3	20.6	40.6	29.2	10.2	2.9
HARNETT COUNTY	301	30.1	9.9	20.9	31.7	17.9	24.6	7.7
HOKE COUNTY	96	22.6	5.4	13.4	52.0	36.5	23.2	11.5
LEE COUNTY	242	44.5	10.1	20.8	31.2	12.1	15.5	4.1
MONTGOMERY COUNTY	123	34.7	14.0	20.1	36.7	14.8	26.8	9.8
MOORE COUNTY	242	33.0	8.6	22.1	29.4	19.5	15.6	5.4
RICHMOND COUNTY	161	22.8	7.1	13.3	39.6	30.4	15.6	5.6
ROBESON COUNTY	270	20.1	4.0	16.2	21.0	18.7	32.4	12.3
FAIRMONT CITY	59	38.6	11.0	21.5	49.9	39.0	17.0	10.2
LUMBERTON CITY	142	43.0	10.9	24.1	36.7	28.9	17.9	3.5
RED SPRINGS	48	31.8	0.6	26.1	45.1	33.3	20.2	10.9
SAINT PAULS CITY	36	31.0	0.8	34.1	43.3	25.0	1.2	11.1
SCOTLAND COUNTY	253	36.7	16.0	13.5	45.4	38.9	19.7	10.7

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA II --- 1989

REGION NORTH CENTRAL REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
ALAMANCE COUNTY	391	43.1	15.9	23.5	19.5	13.8	19.9	4.6
BURLINGTON CITY	309	63.2	15.0	29.1	34.1	24.2	14.4	4.6
CASWELL COUNTY	109	34.0	8.4	18.8	49.9	53.2	23.0	8.3
CHATHAM COUNTY	176	37.3	4.3	29.5	31.7	23.4	18.0	5.1
DAVIDSON COUNTY	549	40.9	13.7	24.1	3.2	4.4	16.1	5.9
LEXINGTON CITY	120	45.8	23.3	18.7	39.9	33.9	28.6	12.6
THOMASVILLE CITY	50	24.4	11.4	12.9	47.5	26.5	29.6	8.2
FORSYTH COUNTY	1411	47.4	14.4	18.7	36.6	22.4	11.1	2.5
GUILFORD COUNTY	956	51.2	13.5	25.3	17.0	8.0	9.2	4.1
GREENSBORO CITY	857	52.5	15.9	22.6	51.3	36.1	12.4	2.1
HIGH POINT CITY	223	32.6	18.3	12.8	48.8	29.3	19.1	6.8
ORANGE COUNTY	177	41.9	10.8	21.8	27.5	27.1	20.2	6.2
CHAPEL HILL CITY	248	68.9	17.0	32.5	21.9	7.3	7.0	1.6
PERSON COUNTY	181	44.6	10.6	20.0	37.2	21.8	22.6	6.5
RANDOLPH COUNTY	346	29.1	10.8	20.2	5.7	4.1	24.1	9.6
ASHEBORO CITY	129	50.0	18.4	26.1	16.0	13.2	17.9	2.3
ROCKINGHAM COUNTY	103	29.9	1.5	31.4	20.3	20.4	24.2	3.9
EDEN CITY	108	33.2	5.9	20.9	21.4	16.7	20.3	3.7
WESTERN ROCKINGHAM	110	36.3	11.5	18.7	20.1	16.4	28.1	13.6
REIDSVILLE CITY	95	34.4	13.3	17.0	47.3	25.8	25.5	9.6
STOKES COUNTY	208	41.9	13.8	17.0	7.7	5.3	19.6	4.9

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA II --- 1989

REGION SOUTHWEST REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
ANSON COUNTY	130	33.4	12.9	18.3	61.0	47.7	15.3	7.0
CABARRUS COUNTY	492	49.5	15.9	23.4	14.8	6.5	13.4	5.5
KANNAPOLIS CITY	178	49.9	8.2	42.4	27.5	23.6	29.4	9.1
CLEVELAND COUNTY	214	32.9	0.5	18.2	25.5	17.8	18.5	6.6
KINGS MTN. CITY	102	33.2	12.3	11.9	23.7	14.7	21.5	7.0
SHELBY CITY	141	52.2	20.1	29.7	45.2	20.7	14.9	5.0
GASTON COUNTY	1010	41.7	7.6	26.4	17.6	12.2	25.9	6.9
LINCOLN COUNTY	244	37.1	5.6	22.0	11.8	12.0	23.0	4.5
MECKLENBURG COUNTY	2576	48.0	16.0	21.5	39.4	23.3	13.4	2.9
ROWAN COUNTY	550	51.1	19.6	25.5	16.0	11.3	15.7	7.1
SALISBURY CITY	113	57.9	22.3	26.6	57.6	30.9	11.2	0.9
STANLY COUNTY	205	37.5	14.4	21.7	12.8	6.4	16.7	6.6
ALBEMARLE CITY	66	39.8	17.2	14.7	27.6	10.6	20.5	6.2
UNION COUNTY	365	33.6	11.8	17.3	14.9	8.8	14.6	4.1
MONROE CITY	97	42.0	8.9	23.6	57.8	44.3	22.4	8.3

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

REGION NORTHWEST — REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
ALEXANDER COUNTY	174	44.5	12.8	24.2	8.3	5.2	23.1	5.8
ALLEGHANY COUNTY	46	35.7	0.0	25.4	2.7	6.5	31.0	4.3
ASHE COUNTY	135	40.3	28.2	13.9	1.0	1.5	22.7	8.2
AVERY COUNTY	61	27.7	0.9	24.0	0.7	0.0	18.4	8.5
BURKE COUNTY	338	34.8	6.9	26.3	8.2	10.1	21.3	5.0
CALDWELL COUNTY	276	26.8	0.3	31.4	7.9	4.0	26.7	5.5
CATAWBA COUNTY	461	43.0	24.3	20.0	7.6	4.1	15.0	7.0
HICKORY CITY	143	39.4	15.0	26.2	26.5	7.0	21.9	2.1
NEWTON-CONOVER CITY	94	39.0	6.3	25.0	19.2	12.0	17.6	10.6
DAVIE COUNTY	147	38.8	11.1	23.6	10.5	9.6	8.6	2.0
IREDELL COUNTY	363	38.6	20.1	20.6	14.4	7.5	15.8	4.5
MOORESVILLE CITY	96	61.9	30.7	16.0	25.7	10.4	19.3	2.1
STATESVILLE CITY	115	45.1	3.8	30.1	55.0	28.9	24.2	6.1
SURRY COUNTY	196	28.7	6.2	21.4	4.5	3.1	21.1	12.3
ELKIN CITY	60	71.4	30.7	30.5	9.2	1.7	10.6	5.0
MOUNT AIRY CITY	67	51.1	21.7	10.3	12.5	9.0	22.8	9.0
WATAUGA COUNTY	154	44.4	7.6	34.9	1.4	0.6	16.9	1.9
WILKES COUNTY	332	37.8	7.9	25.3	6.3	6.9	22.4	7.0
YADKIN COUNTY	149	35.6	8.9	25.5	5.0	1.3	17.1	6.1

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 11, cont'd.

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM

ALGEBRA II --- 1989

REGION WESTERN REGION REPORT

	NUMBER TESTED	PERCENT OF CLASS	PERCENT OF TENTH GRADE	PERCENT OF ELEVENTH GRADE	PERCENT BLACK	PERCENT ALGEBRA II BLACK	PERCENT LESS THAN HS EDUC	PERCENT ALGEBRA II LESS THAN HS EDUC
BUNCOMBE COUNTY	757	42.2	9.5	21.3	5.4	4.0	14.0	3.5
ASHEVILLE CITY	145	43.4	5.8	29.1	40.4	25.0	9.5	3.4
CHEROKEE COUNTY	107	31.8	14.6	20.2	2.2	5.6	21.1	8.5
CLAY COUNTY	28	26.4	3.5	23.8	0.8	0.0	22.6	7.1
GRAHAM COUNTY	61	57.0	18.0	29.8	0.0	0.0	15.1	0.0
HAYWOOD COUNTY	222	37.5	10.2	19.9	1.8	2.7	18.8	2.3
HENDERSON COUNTY	279	43.1	4.6	23.7	1.5	0.0	18.4	6.1
HENDERSONVILLE CITY	106	68.4	22.7	34.5	25.6	8.6	11.1	1.9
JACKSON COUNTY	143	47.2	13.0	26.0	1.2	2.1	20.1	4.2
MACON COUNTY	100	35.0	8.4	25.7	0.9	0.0	16.9	5.0
MADISON COUNTY	53	19.5	0.5	24.6	0.3	0.0	22.8	7.5
MCDOWELL COUNTY	179	31.3	4.5	21.7	5.1	7.8	20.4	5.1
MITCHELL COUNTY	70	35.2	7.1	20.8	0.1	1.4	25.6	2.9
POLK COUNTY	52	32.3	12.4	11.5	13.6	3.8	16.5	5.8
RUTHERFORD COUNTY	234	25.5	7.3	20.5	16.1	9.4	18.7	7.3
SWAIN COUNTY	42	32.1	2.3	21.1	0.4	2.4	23.3	4.9
TRANSYLVANIA COUNTY	124	33.3	5.7	25.8	7.0	3.3	24.7	6.5
YANCEY COUNTY	75	31.9	20.0	14.9	1.0	1.3	10.9	9.3

NOTE: NUMBER TESTED IS THE NUMBER OF STUDENTS WHO TOOK THE ALGEBRA II TEST. PERCENT OF CLASS IS THE TOTAL NUMBER OF ALGEBRA II STUDENTS DIVIDED BY THE NUMBER OF STUDENTS IN THE NINTH GRADE CLASS. IT IS AN ESTIMATE OF THE PERCENT OF A COHORT OR CLASS OF STUDENTS WHO WILL TAKE ALGEBRA II BEFORE LEAVING HIGH SCHOOL. PERCENT OF TENTH GRADE IS THE PERCENT OF TENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT OF ELEVENTH GRADE IS THE PERCENT OF ELEVENTH GRADE STUDENTS TAKING ALGEBRA II. PERCENT BLACK IS THE PERCENT OF TOTAL ENROLLMENT THAT IS BLACK. PERCENT ALGEBRA II BLACK IS THE PERCENT OF ALGEBRA II STUDENTS THAT IS BLACK. PERCENT LESS THAN HS EDUC IS THE PERCENT OF EIGHTH GRADE STUDENTS TAKING THE CALIFORNIA ACHIEVEMENT TEST IN 1989 WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION. PERCENT ALGEBRA II LESS THAN HS EDUC IS THE PERCENT OF ALGEBRA II STUDENTS WHOSE PARENTS HAVE LESS THAN A HIGH SCHOOL EDUCATION.

Table 12

State Percentile Table for 1988

STATE

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
ALGEBRA 2 --- 1988

SUMMARY STATISTICS ON CORE TEST

NUMBER OF STUDENTS WITH VALID SCORES	36414	HIGH SCORE	56
		LOW SCORE	3
MEAN	36.2	LOCAL PERCENTILES	RAW SCORE
STANDARD DEVIATION	10.7	90	51
		75	45
		50 (MEDIAN)	36
VARIANCE	113.9	25	28
		10	21
MEAN PERCENT CORRECT	64.6		

FREQUENCY DISTRIBUTION

RAW SCORE	FREQUENCY	CUMULATIVE FREQUENCY	PERCENT	CUMULATIVE PERCENT	STATE PERCENTILE
56	300	36414	0.82	100.00	99
55	460	36114	1.26	99.18	99
54	631	35654	1.73	97.91	97
53	709	35023	1.95	96.18	95
52	795	34314	2.18	94.23	93
51	770	33519	2.11	92.05	91
50	783	32749	2.15	89.94	89
49	827	31966	2.27	87.78	87
48	884	31139	2.43	85.51	84
47	949	30255	2.61	83.09	82
46	1044	29306	2.87	80.48	79
45	1018	28262	2.80	77.61	76
44	1071	27244	2.94	74.82	73
43	1080	26173	2.97	71.88	70
42	1085	25093	2.98	68.91	67
41	1170	24008	3.21	65.93	64
40	1170	22838	3.21	62.72	61
39	1174	21668	3.22	59.50	58
38	1168	20494	3.21	56.28	55
37	1118	19326	3.07	53.07	52
36	1209	18208	3.32	50.00	48
35	1205	16999	3.31	46.68	45
34	1171	15794	3.22	43.37	42
33	1117	14623	3.07	40.16	39
32	1080	13506	2.97	37.09	36
31	1070	12426	2.94	34.12	33
30	1069	11356	2.94	31.19	30
29	989	10287	2.72	28.25	27
28	942	9298	2.59	25.53	24
27	889	8356	2.44	22.95	22
26	891	7467	2.45	20.51	19
25	874	6576	2.40	18.06	17
24	725	5702	1.99	15.66	15
23	757	4977	2.08	13.67	13
22	563	4220	1.55	11.59	11
21	568	3657	1.56	10.04	9
20	539	3089	1.48	8.48	8
19	472	2550	1.30	7.00	6
18	448	2078	1.23	5.71	5
17	368	1630	1.01	4.48	4
16	309	1262	0.85	3.47	3
15	267	953	0.73	2.62	2
LESS THAN 15	686	686	1.88	1.88	2

Table 13

State Percentile Table for 1989

End Of Course Testing

STATE

NORTH CAROLINA END-OF-COURSE TESTING PROGRAM
ALGEBRA II --- 1989

SUMMARY STATISTICS ON CORE TEST

NUMBER OF STUDENTS WITH VALID SCORES	35132	HIGH SCORE	56
		LOW SCORE	1
MEAN	37.6	LOCAL PERCENTILES	RAW SCORE
STANDARD DEVIATION	9.1	90	49.60
		75	44.45
VARIANCE	82.7	50 (MEDIAN)	38.02
		25	31.32
MEAN PERCENT CORRECT	67.2	10	25.31

FREQUENCY DISTRIBUTION

RAW SCORE	FREQUENCY	CUMULATIVE FREQUENCY	PERCENT	CUMULATIVE PERCENT	STATE PERCENTILE
56	112	35132	0.32	100.00	99
55	260	35020	0.74	99.68	99
54	493	34760	1.40	98.94	98
53	572	34267	1.63	97.54	97
52	644	33695	1.83	95.91	95
51	713	33051	2.03	94.08	93
50	798	32338	2.27	92.05	91
49	882	31540	2.51	89.78	89
48	961	30658	2.74	87.27	86
47	1004	29697	2.86	84.53	83
46	1101	28693	3.13	81.67	80
45	1182	27592	3.36	78.54	77
44	1222	26410	3.48	75.17	73
43	1319	25188	3.75	71.70	70
42	1338	23869	3.81	67.94	66
41	1397	22531	3.98	64.13	62
40	1406	21134	4.00	60.16	58
39	1472	19728	4.19	56.15	54
38	1433	18256	4.08	51.96	50
37	1425	16823	4.06	47.89	46
36	1329	15398	3.78	43.83	42
35	1349	14069	3.84	40.05	38
34	1292	12720	3.68	36.21	34
33	1226	11428	3.49	32.53	31
32	1219	10202	3.47	29.04	27
31	1091	8983	3.11	25.57	24
30	1016	7892	2.89	22.46	21
29	942	6876	2.68	19.57	18
28	842	5934	2.40	16.89	16
27	794	5092	2.26	14.49	13
26	666	4298	1.90	12.23	11
25	617	3632	1.76	10.34	9
24	513	3015	1.46	8.58	8
23	487	2502	1.39	7.12	6
22	378	2015	1.08	5.74	5
21	363	1637	1.03	4.66	4
20	293	1274	0.83	3.63	3
19	241	981	0.69	2.79	2
18	217	740	0.62	2.11	2
17	138	523	0.39	1.49	1
16	130	385	0.37	1.10	1
LESS THAN 16	255	255	0.73	0.73	1

Schedule for End-of-Course Testing: Revised May, 1989

Subject	School Year 1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
Algebra I	▨	■	■	■	■	■	■	■
Algebra II		▨	■	■	■	■	■	■
Geometry				▨	■	■	■	■
Biology	▨	▨	■	■	■	■	■	■
Chemistry				▨	■	■	■	■
Physical Science						▨	■	■
Physics					▨	■	■	■
English I: Reading & Grammar (Reading Comprehension, Editing, and Literary Terms)					▨	■	■	■
English II: Composing					▨	▨	▨	■
English III: Reading and Analyzing Literature							▨	■
Government & Economics						▨	■	■
U.S. History			▨	■	■	■	■	■
Health & P.E.							▨	■
Foreign Language (To be specified)								▨

▨ Development: Items written by N.C. teachers; edited and placed in booklets; reviewed by teachers; field tested with students

■ Testing and Reporting: Multiple forms in each class, common (core) and different items on each form, student and curriculum information